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IN SAVING SCHOOL MATHEMATICS

WORKBOOK

Accompanying
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CURR

Investigating School Mathematics

Workbook

ROBERT E. EICHLZ

PHARES G. O'DAFFER

CHARLES R. FLEENOR



ADDISON-WESLEY (CANADA) LTD.

DON MILLS, ONTARIO • READING, MASSACHUSETTS • MENLO PARK, CALIFORNIA • LONDON

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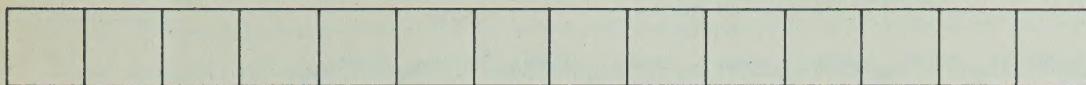
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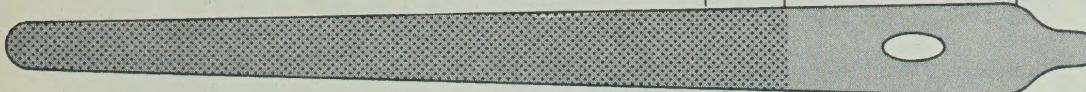
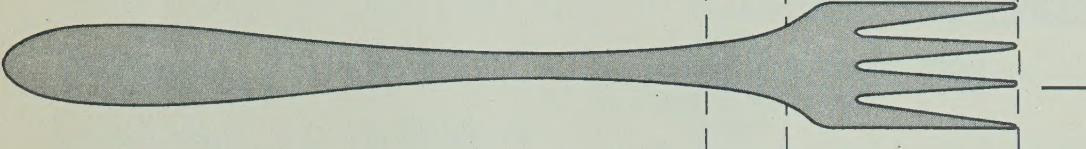
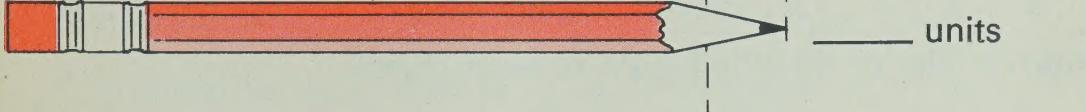
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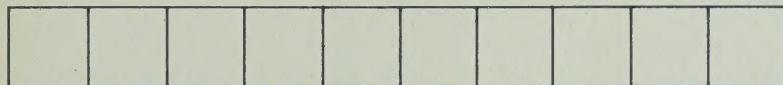
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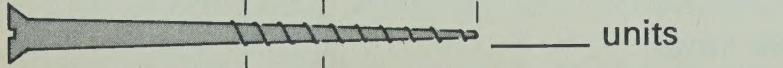
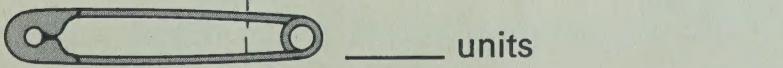
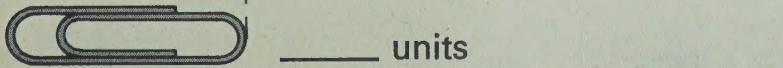
How long is each object? Count the number of strip units.



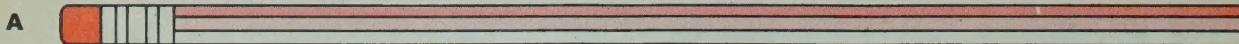
1.  _____ units
2.  _____ units
3.  _____ units
4.  _____ units

How many strip units long is each object?



5.  _____ units
6.  _____ units
7.  _____ units
8.  _____ units

1. Use your **centimetre** ruler to find the length of each object.



The pencil is _____ centimetres long.



The chain is _____ centimetres long.



The knife is _____ centimetres long.

2. Use your **centimetre** ruler to find the length of each object.



The nail is _____ centimetres long.

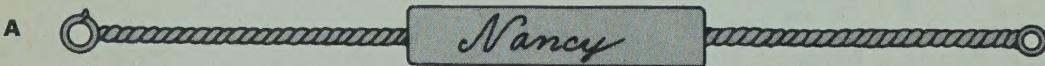


The strip is _____ centimetres long.



The spring is _____ centimetres long.

3. Use your **centimetre** ruler to measure each object.



It is almost _____ centimetres long.



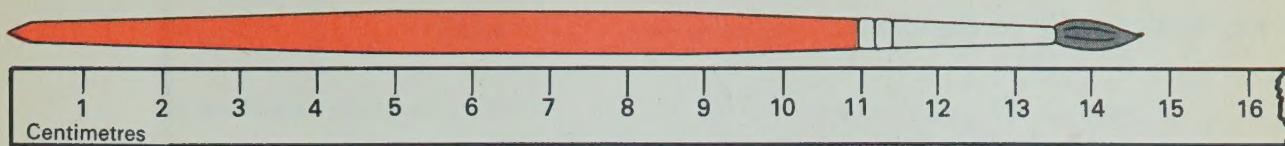
The whistle is _____ centimetres long.



The needle is _____ centimetres long.

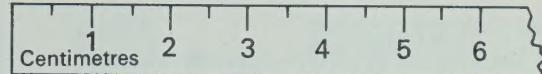
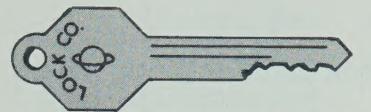


The pin is _____ centimetres long.

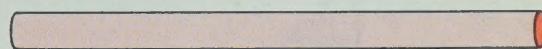


1. A The length of the brush is more than _____ centimetres but less than _____ centimetres
 B Is it closer to 14 or 15? _____
 C The length of the brush (to the nearest centimetre) is _____ centimetres.

2. A The length of the key is
 more than _____ centimetres
 but less than _____ centimetres.
 B It is closer to _____ than to _____ centimetres.
 C The length of the key (to the nearest centimetre) is _____ centimetres.

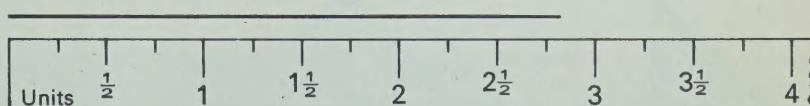


3. Use your centimetre ruler
 to find the length of the stick



to the nearest centimetre. _____ centimetres

4. The length of the black segment is between the half-unit marks $2\frac{1}{2}$ and 3.



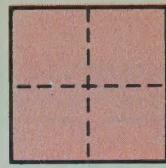
A Is the length of the black segment closer to $2\frac{1}{2}$ or to 3? _____
 B The length of the black segment (to the nearest half unit) is _____ units.
 C The length of the colored segment is between _____ and _____ units.
 D The length of the colored segment (to the nearest half unit) is _____ units.

5. Find the length of each object to the nearest half centimetre.

A  _____ centimetres

B  _____ centimetres

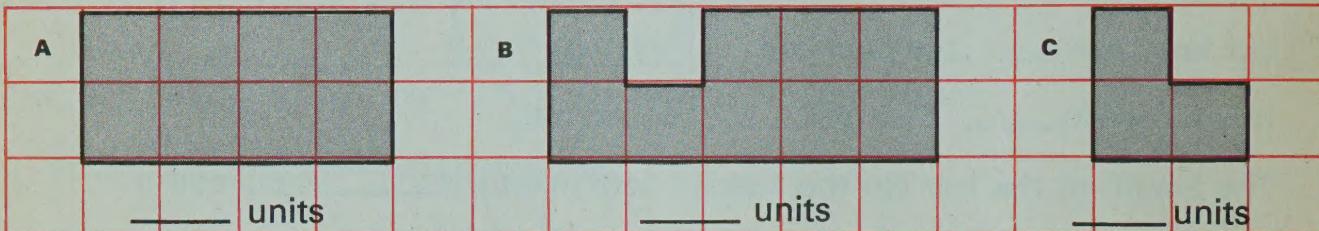
1. How many gray squares are needed to cover the colored region? _____



The number of square units needed to "cover" a region is called the **area** of the region.

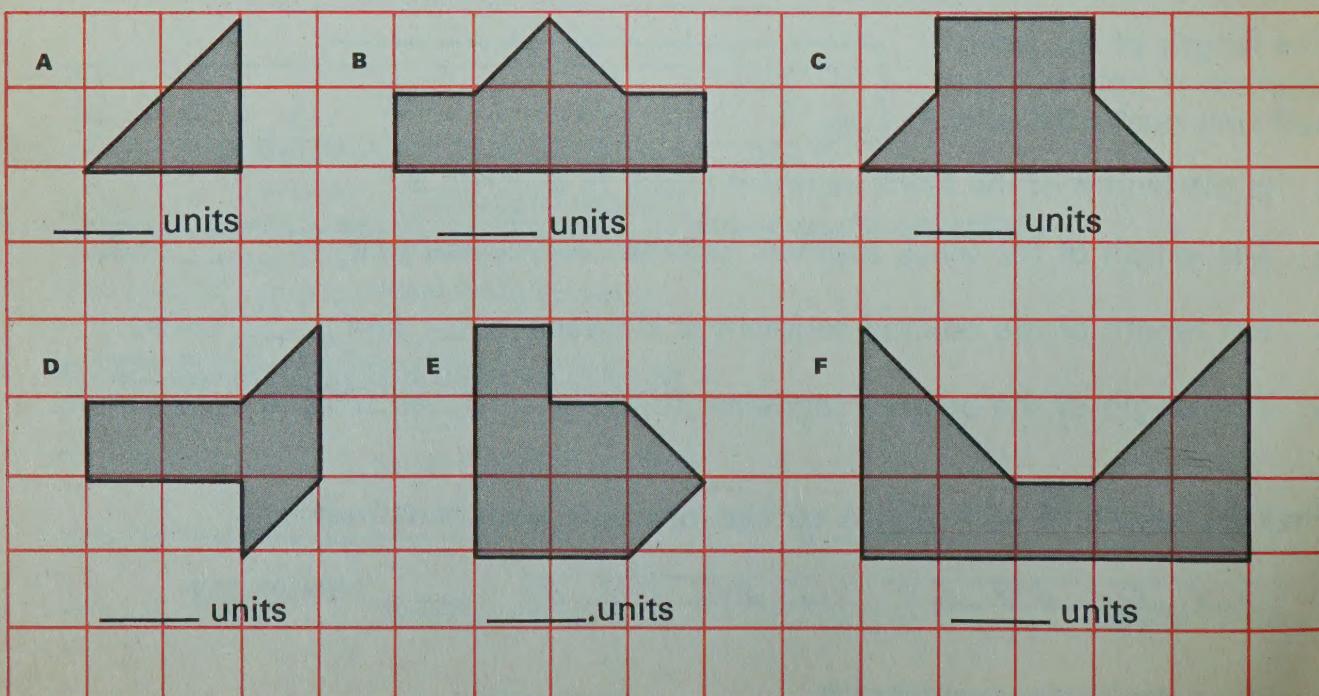
The area of the colored region is _____ square units.

2. Give the area of each shaded region. Use  as your unit.

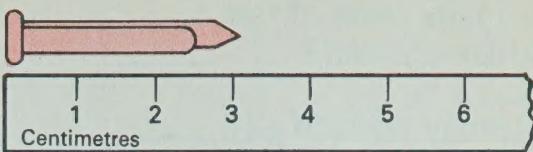


3. How many of these  are needed to cover ? _____

4. Give the area of each region.



1. A Is the end of the paper fastener closer to 3 cm or 4 cm?



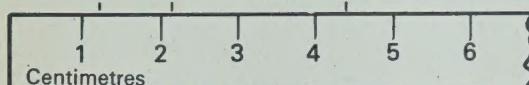
B The length of the paper fastener is _____ centimetres.

2. Give the length of each bar to the nearest centimetre.

A _____ centimetres

B _____ centimetres

C _____ centimetres



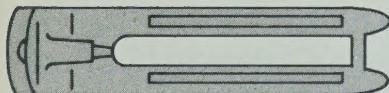
3. Use your centimetre ruler to find the length of each object to the nearest half centimetre.

A _____ centimetres

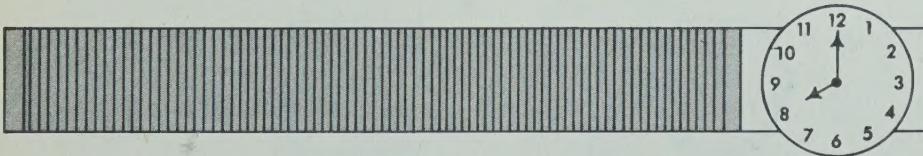


_____ centimetres

B _____ centimetres

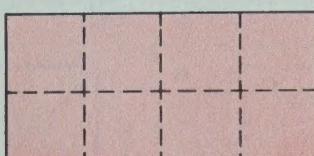


C _____ centimetres



_____ centimetres

4. A If  is the unit, what is the area of the rectangle? _____ units.



B The area of $\frac{1}{2}$ of it is _____ units.

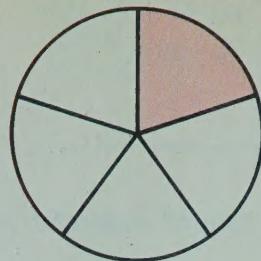
C The area of $\frac{1}{4}$ of it is _____ units.

D The area of $\frac{3}{4}$ of it is _____ units.

1. A How many parts of the circle are colored? _____

B How many parts in all? _____

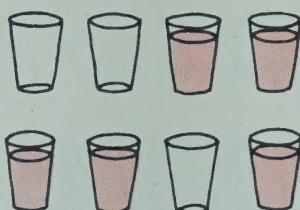
C Give the fraction that tells what part of the circle is colored. _____



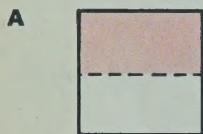
2. A How many glasses are full? _____

B How many glasses in all? _____

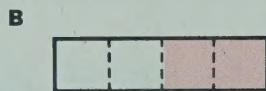
C Give the fraction that tells what part of the glasses are full. _____



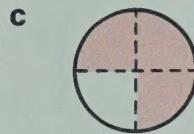
3. Circle the fraction that tells what part of each region is colored.



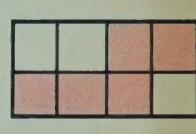
$\frac{1}{2} \quad \frac{3}{4} \quad \frac{1}{4}$



$\frac{2}{4} \quad \frac{1}{3} \quad \frac{3}{4}$

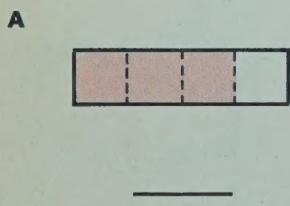


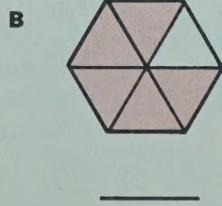
$\frac{1}{4} \quad \frac{3}{3} \quad \frac{3}{4}$

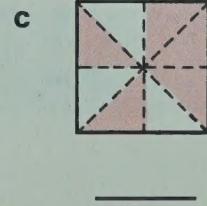


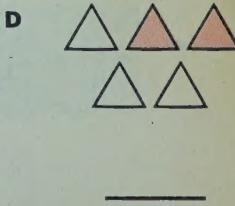
$\frac{3}{4} \quad \frac{5}{8} \quad \frac{3}{8}$

4. Give the fraction that tells what part of each region or set is colored.

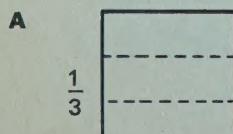




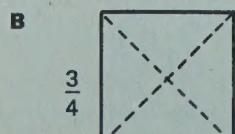




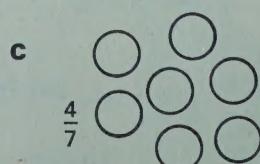
5. The fraction next to each region or set tells what part you should color.



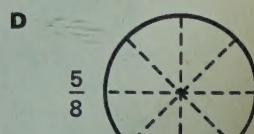
$\frac{1}{3}$



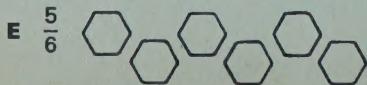
$\frac{3}{4}$



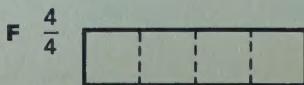
$\frac{4}{7}$



$\frac{5}{8}$

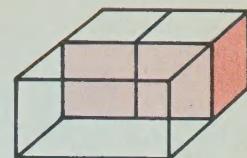
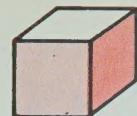


$\frac{5}{6}$



$\frac{4}{4}$

1. How many cubes will the box hold? _____



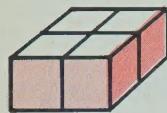
Centimetre
cube

The number of cubes needed to "fill" a box is called the **volume** of the box.

The volume of the box is _____ centimetre cubes.

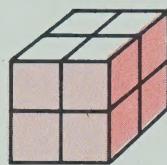
2. The unit used in the exercises below is . Give the volume of each figure.

A



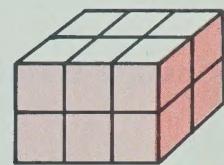
_____ centimetre cubes

B



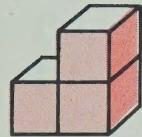
_____ centimetre cubes

C



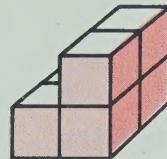
_____ centimetre cubes

D



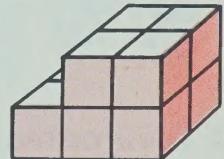
_____ centimetre cubes

E



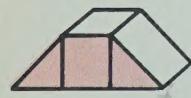
_____ centimetre cubes

F



_____ centimetre cubes

G



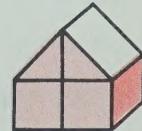
_____ centimetre cubes

H



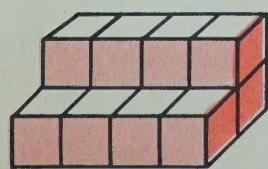
_____ centimetre cubes

I



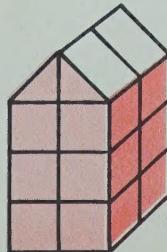
_____ centimetre cubes

J



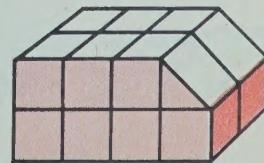
_____ centimetre cubes

K



_____ centimetre cubes

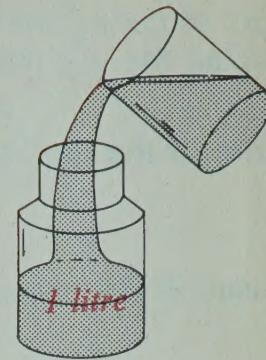
L



_____ centimetre cubes

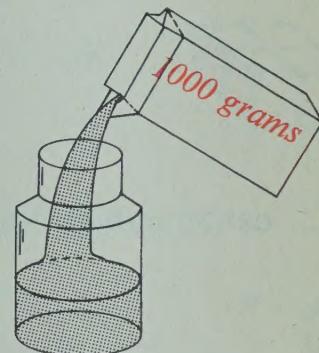
1. A litre will hold 1 kilogram of water.

- A A litre contains _____ kilogram of water.
- B Two kilograms of water could be held in a _____ container.



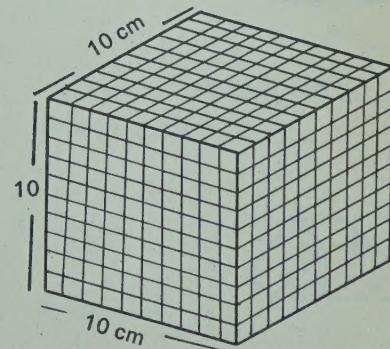
2. A litre of water weighs 1000 grams.

- A Half a litre weighs _____ grams.
- B 1000 grams is equal to _____ kilograms.



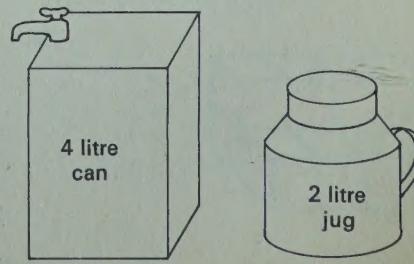
3. There are 1000 cubic centimetres in a litre.

- A A $\frac{1}{2}$ -litre is equal to _____ cm^3 .
- B A 2-litre container is equal to _____ cm^3 .



4. A 4-litre can and a 2-litre jug.

- A The can would hold _____ jugs.
- B Four jugs could be emptied into _____ cans.

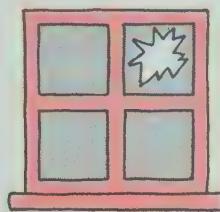


1. Three boys. Two girls.
Give the fraction that
tells what part of the
children are boys. _____

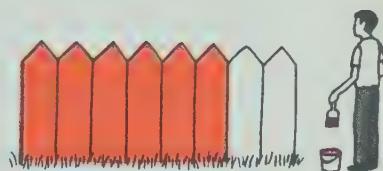


2. A What fraction tells
what part of the
window is broken? _____

B What part of the
window is not broken? _____



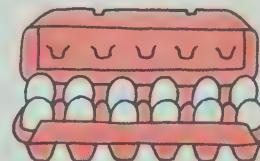
3. Mr. James painted $\frac{3}{4}$ of
his fence. What part
does he have left to paint? _____



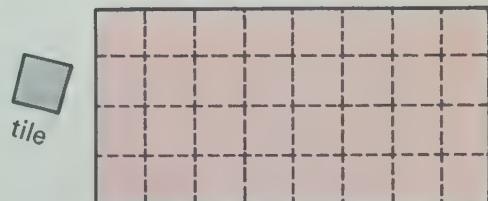
4. Six ice cream bars. Dave
ate $\frac{1}{3}$ of them. How many
did he eat? _____



5. One dozen eggs. Joan used
 $\frac{1}{2}$ of them to make cookies.
How many eggs did she use? _____



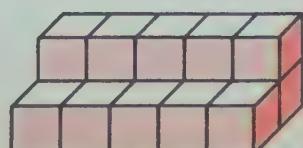
6. How many tiles are needed
to cover the floor? _____



7. Is the key 5 cm long, less than 5 cm or
longer than 5 cm? _____



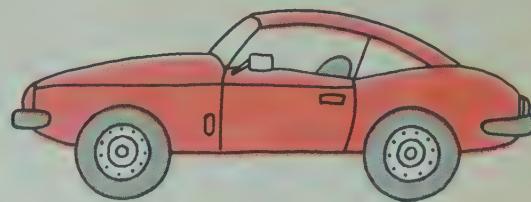
8. How many cubes are in
the stack? _____



1. Estimate then use your centimetre ruler to find the length of the car

A to the nearest centimetre. _____

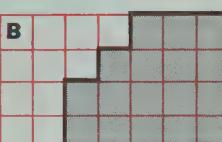
B to the nearest half centimetre. _____



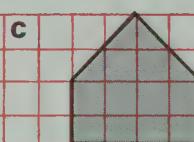
2. Using the unit \square , give the area of each shaded region.



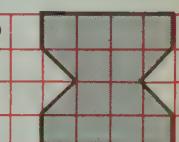
_____ units



_____ units



_____ units



_____ units

3. Give the volume of each figure. Use \square^3 as your unit.



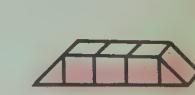
_____ units



_____ units



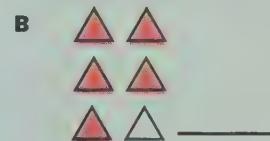
_____ units

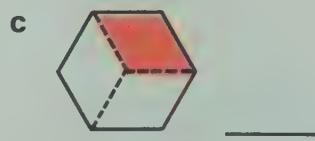


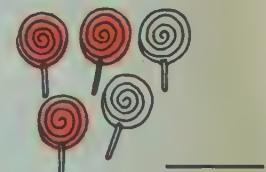
_____ units

4. Give the fraction that tells what part of each region or set is colored.

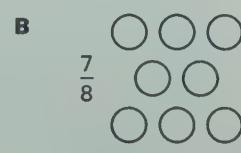








5. Color the part of the region or set indicated by the fraction.



CHANGE OF PACE

Use the equation

$$17 - 9 = 8$$

to fill in the blanks
in the story.

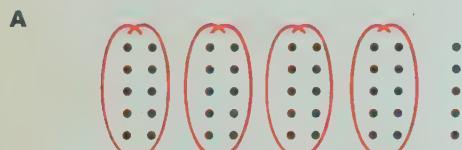
The king had _____ horses
and only _____ men. He said,
"My goodness, I have _____
more horses than men!"



1. Draw rings around sets of 10 objects.

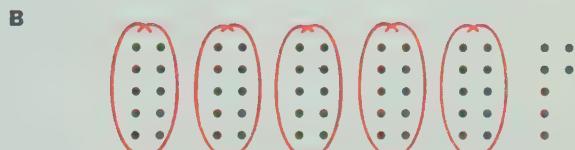


2. Write the correct numeral in each blank.



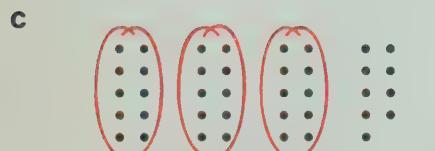
4 tens and _____.

We write _____.



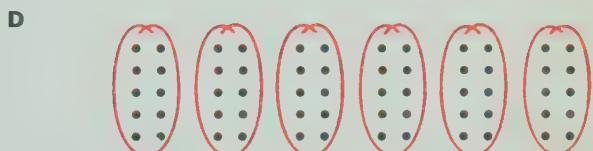
_____ tens and _____.

We write _____.



_____ tens and _____.

We write _____.



_____ tens and _____.

We write _____.

3. Write the correct 2-digit numeral in each blank.

A 3 tens and 2 _____

D 5 tens and 5 _____

B 1 ten and 7 _____

E 6 tens and 3 _____

C 4 tens and 1 _____

F 9 tens and 0 _____

4. Write the correct digit in each blank.

A 39 means 3 tens and _____.

D 67 means _____ tens and 7.

B 76 means _____ tens and 6.

E 28 means _____ tens and _____.

C 40 means _____ tens and 0.

F 80 means 8 tens and _____.



For 9 tens we write _____.

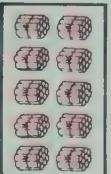
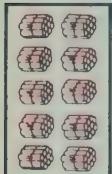


For 10 tens we write _____.

2. Since we write 100 for one hundred, we write _____ for two hundreds.

For three hundreds, we write _____. For nine hundreds we write _____.

3. Set A Set B Set C Set D



Each bundle has 10 sticks.

A There are _____ sticks in set A.

B There are _____ sticks in set B.

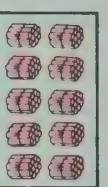
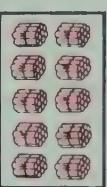
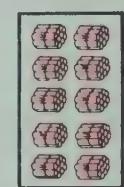
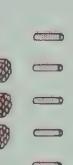
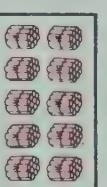
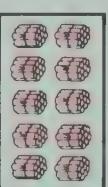
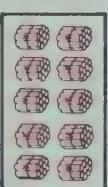
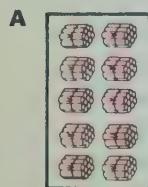
C There are _____ sticks in set C.

D There are _____ sticks in set D.

E In all, there are _____ sets of 100, _____ sets of 10, and _____ extra sticks.

F To tell how many, we write _____.

4. Write the correct numeral in each blank. There are 10 sticks in each bundle.



_____ hundreds, _____ tens, and _____

_____ hundreds, _____ tens, and _____

To tell how many, we write _____.

We write _____.

5. Write the correct digit in each blank.

A 567 means _____ hundreds, _____ tens, and _____.

B 814 means _____ hundreds, _____ tens, and _____.

C 604 means _____ hundreds, _____ tens, and _____.

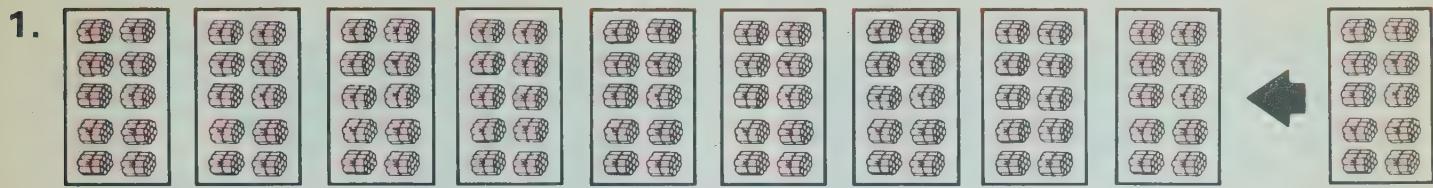
6. Write the correct 3-digit numeral in each blank. (*h* stands for hundreds, *t* for tens.)

A $4h, 2t$, and 6 _____

C $6h, 9t$, and 0 _____

B $9h, 3t$, and 1 _____

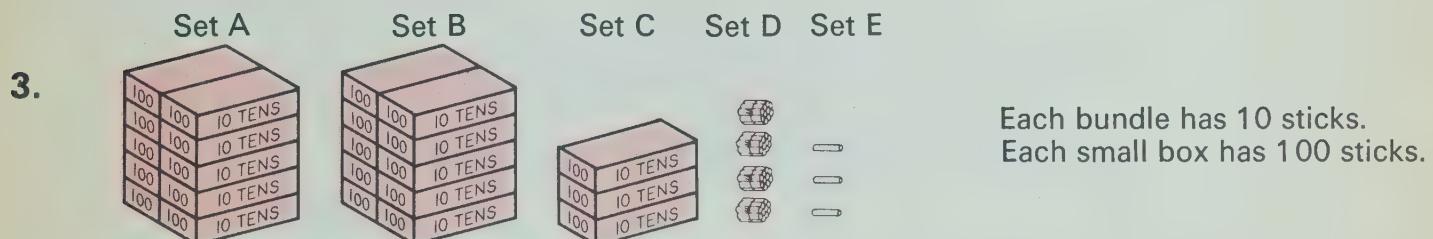
D $3h, 0t$, and 7 _____



For **9** hundreds, we write _____. For **10** hundreds, we write _____.

2. Since we write **1000** for **one** thousand, we write _____ for **two** thousand.

For **four** thousand we write _____. For **nine** thousand we write _____.



A There are _____ sticks in set A.

B There are _____ sticks in set B.

C There are _____ sticks in set C.

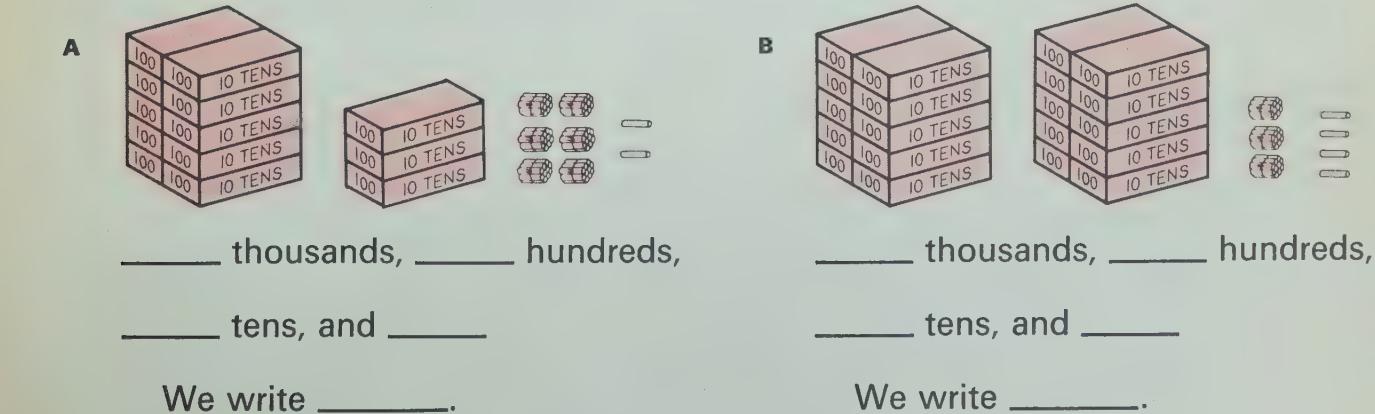
D There are _____ sticks in set D.

E There are _____ sticks in set E.

F In all, there are _____ sets of 1000,
_____ sets of 100,
_____ sets of 10,
and _____ extra sticks.

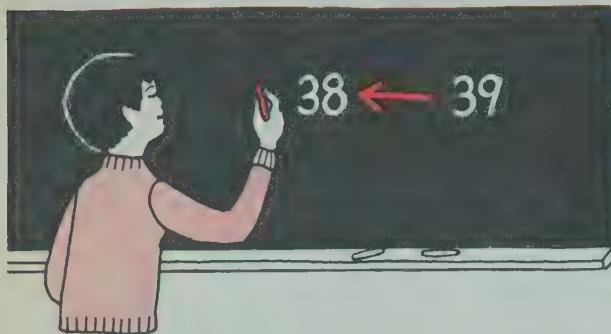
G To tell how many, we write _____.

4. Write the correct numeral in each blank.

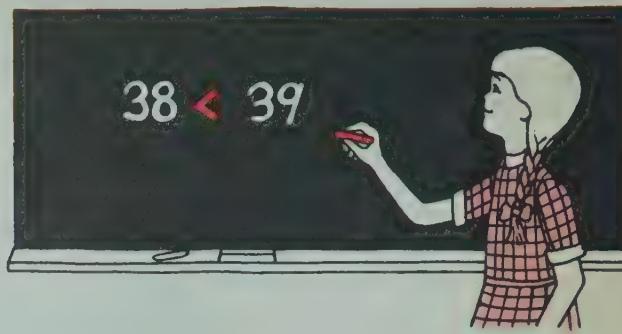


5. Write **thousands**, **hundreds**, **tens**, or **ones** in the blank to tell what the red digit in each numeral stands for.

A 4**5**69 _____ B 134**8** _____ C 69**8**8 _____



John used colored chalk to draw an arrow that points to the smaller number.



Jane used a short cut and drew only the head of the arrow to point to the smaller number.

For $38 < 39$ we read "38 is less than 39."

For $39 > 38$ we read "39 is greater than 38."

1. In each draw an arrow that points to the smaller number. Then write **greater** or **less** in each blank.

A $5 \img{arrow}{left} 10$

5 is LESS than 10.

C $320 \img{arrow}{right} 32$

320 is _____ than 32.

E $10 \img{arrow}{right} 9$

10 is _____ than 9.

B $39 \img{arrow}{right} 49$

39 is _____ than 49.

D $34 \img{arrow}{right} 43$

34 is _____ than 43.

F $54 \img{arrow}{right} 47$

54 is _____ than 47.

2. Put the correct mark (< or >) in each

A $47 \img{arrow}{right} 54$

D $850 \img{arrow}{right} 820$

G $1343 \img{arrow}{right} 1443$

B $136 \img{arrow}{right} 145$

E $461 \img{arrow}{right} 641$

H $6680 \img{arrow}{right} 6608$

C $332 \img{arrow}{right} 323$

F $425 \img{arrow}{right} 445$

I $6749 \img{arrow}{right} 6794$

3. Write these numbers in order from the smallest to the largest.

934

431

19

143

1394

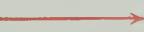
93

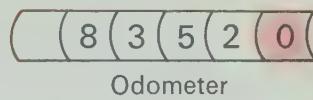
194

9413

143

934

1. A If the odometer on your car looks like this  when you leave home, what will the odometer show when you are 1 kilometre away from home? _____



B When you are 10 kilometres from home, the odometer will show _____.
 C When you are 100 kilometres from home, it will show _____.
 D When you are 1000 kilometres from home, it will show _____.

2. The red digit in each numeral tells how many ones (*o*), tens (*t*), hundreds (*h*) or thousands (*th*) in each numeral. Write *o*, *t*, *h*, or *th* in each blank.

A 9736 _____

C 6874 _____

E 4986 _____

B 8034 _____

D 7502 _____

F 2934 _____

3. Use the numerals in the cloud to fill in the blanks below.



A Which is the numeral for **six thousand, three hundred forty-five?** _____

B Which number is 1 more than 99 999? _____

C Which number is between 1500 and 2500? _____

D Which number is 10 less than 5637? _____

E Which number is 1 less than 999? _____

F Which numbers are greater than 500 000? _____ and _____

G Which numbers are less than 1000? _____ and _____

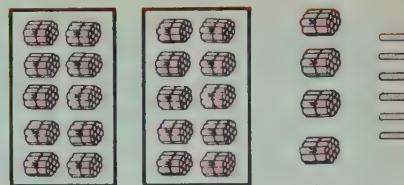
4. Write the numeral for each exercise.

A Three hundred seventy-four _____

B Forty-five thousand, eight hundred thirty-one _____

C Five hundred sixteen thousand, one hundred nine _____

1. To tell how many sticks are in the picture, we write _____.



2. Write the correct numeral in each blank.

A One hundred is _____ tens. B One thousand is _____ hundreds.

3. Write **thousands**, **hundreds**, **tens**, or **ones** in the blank to tell what the red digit in each numeral stands for.

A **5**6 _____

C **3**856 _____

B 8**5**6 _____

D **9**56 _____

4. Write the correct digit in each blank.

A 465 means _____ hundreds, _____ tens, and _____.

B 2708 means _____ thousands, _____ hundreds, _____ tens, and _____.

5. A For **seven hundred twenty-nine**, we write _____.

B For **six thousand, three hundred forty**, we write _____.

6. Put the correct mark (< or >) in each .

A 65  68

C 352  342

E 876  871

G 4000  3999

B 56  86

D 295  301

F 990  1001

H 6258  5765

CHANGE OF PACE

Find the pattern and give three more numbers for each sequence.

1. 2, 4, 6, 8, 10, _____, _____, _____

6. 1, 1, 2, 2, 3, 3, _____, _____, _____

2. 1, 3, 5, 7, 9, _____, _____, _____

7. 30, 28, 26, 24, _____, _____, _____

3. 0, 4, 0, 4, 0, _____, _____, _____

8. 1, 5, 9, 13, 17, _____, _____, _____

4. 0, 5, 10, 15, 20, _____, _____, _____

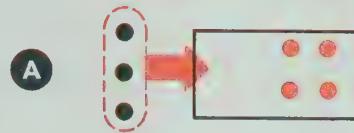
9. 0, 7, 14, 21, _____, _____, _____

5. 1, 2, 4, 8, _____, _____, _____

10. 0, 1, 4, 9, 16, _____, _____, _____

1. Write the letter (A, B, C, or D) of the picture to answer each question.

A For which picture do you think about adding 3 to 4? _____



B For which picture do you think about subtracting 3 from 7? _____



C For which picture do you think about adding 4 to 3? _____



D Which picture shows that there are three dots left? _____



2. Solve each equation. The pictures above may help you.

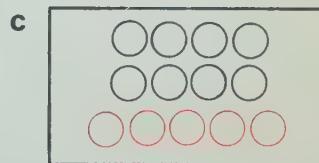
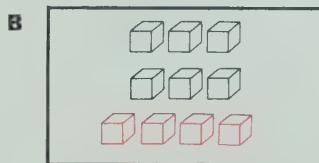
A $4 + 3 =$ _____

B $7 - 3 =$ _____

C $3 + 4 =$ _____

D $7 - 4 =$ _____

3. Write two addition and two subtraction equations for each set.



$$\underline{5} + \underline{4} = \underline{\quad}$$

$$\underline{6} + \underline{4} = \underline{\quad}$$

$$\underline{\quad} + \underline{\quad} = \underline{\quad}$$

$$\underline{4} + \underline{5} = \underline{\quad}$$

$$\underline{\quad} + \underline{\quad} = \underline{\quad}$$

$$\underline{\quad} + \underline{\quad} = \underline{\quad}$$

$$\underline{9} - \underline{4} = \underline{\quad}$$

$$\underline{\quad} - \underline{\quad} = \underline{\quad}$$

$$\underline{\quad} - \underline{\quad} = \underline{\quad}$$

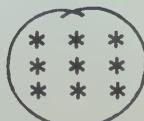
$$\underline{9} - \underline{\quad} = \underline{\quad}$$

$$\underline{\quad} - \underline{\quad} = \underline{\quad}$$

$$\underline{\quad} - \underline{\quad} = \underline{\quad}$$

4. A Write an equation that tells how many objects in sets A and B together. _____

B Write an equation that tells how many more objects in set A than in set B. _____



Set A

Set B

● Addition and Subtraction on the Number Line



The first jump was _____ units long.

$$6 + \underline{\quad} = \boxed{\quad}$$

The second jump was _____ units long.



The first jump was _____ units long.

$$5 + \underline{\quad} = \boxed{\quad}$$

The second jump was _____ units long.



The jump to the right was _____ units long.

$$9 - \underline{\quad} = \boxed{\quad}$$

The jump to the left was _____ units long.



The jump to the right was _____ units long.

$$13 - \underline{\quad} = \boxed{\quad}$$

The jump to the left was _____ units long.



Write an equation for the number-line picture above. _____



Show the jumps on the number line for the equation $12 - 7 = \boxed{\quad}$
Then solve the equation.

These two numbers are addends
 This is their sum →

Addends + Sum
 $3 + 4 = 7$

In the equation $\square + 2 = 7$, one addend is missing.

To solve the equation, think "What number plus 2 equals 7?"

1. Find the missing addends.

A $\square + 3 = 5$

C $\square + 2 = 9$

E $6 + \square = 10$

B $3 + \square = 8$

D $1 + \square = 6$

F $\square + 5 = 7$

You can think of subtraction as finding a missing addend.

$10 - 6 = \square$

Think:

"What number plus 6 equals 10?"
 $\square + 6 = 10$

2. Find the differences by thinking about missing addends.

A $7 - 2 = \square$

C $10 - 8 = \square$

E $5 - 4 = \square$

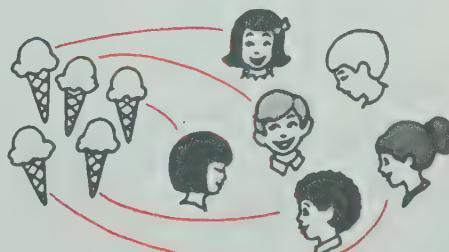
B $4 - 1 = \square$

D $9 - 5 = \square$

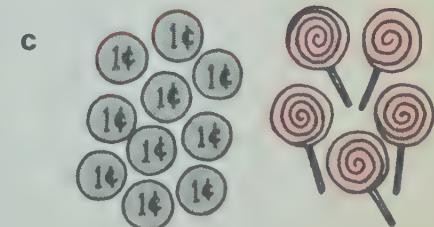
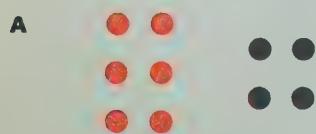
F $8 - 3 = \square$

3. How many more children than ice cream cones? _____

Solve the equation. $6 - 5 = \square$



4. For each pair of sets, write a subtraction equation to tell how many more objects in one set than in another.



_____ - _____ = \square

_____ - _____ = \square

_____ - _____ = \square

- Fill in the squares along the dotted line.
- The sum $3 + 2$ is given. Write the sum $2 + 3$ in the correct square.
- The sum $5 + 2$ is given. Write the sum $2 + 5$.
- The sum $7 + 3$ is given. Write the sum $3 + 7$.
- Fill in the gray part of the table.
- Use the order principle and fill in the rest of the table.

+	0	1	2	3	4	5	6	7	8	9
0										
1										
2										
3						5				
4										
5						7				
6										
7								10		
8										
9										

- Find the sums. The colored blocks tell you which numbers to add first.

A $3 + 4 + 2 =$

c $7 + 3 + 4 =$

e $99 + 1 + 35 =$

B $3 + 4 + 2 =$

d $7 + 3 + 4 =$

f $99 + 1 + 35 =$

- Find the sums. The colored blocks show the addends that are added first.

A $1 + 3 + 5 =$
 $3 + 1 + 5 =$
 $5 + 1 + 3 =$
 $5 + 3 + 1 =$

B $3 + 5 + 1 =$
 $5 + 3 + 1 =$
 $1 + 3 + 5 =$
 $1 + 5 + 3 =$

c $1 + 5 + 3 =$
 $5 + 1 + 3 =$
 $3 + 1 + 5 =$
 $3 + 5 + 1 =$

- Find the sums. Rearrange the addends in any way you wish.

A 3 5
 7 Sum

B 3 2
 8 Sum

c 6 4
 3 Sum

Because of the rearranging principle, we can change the order and grouping of the addends and still get the same sum.

- Find the sums. Look for tens.

A 3
 7
 $+ 5$

B 7
 5
 $+ 3$

c 4
 6
 $+ 9$

d 6
 9
 $+ 4$

e 7
 8
 $+ 1$

f 9
 4
 $+ 1$

1. Find the sums. Look for tens.

A $8 + 2 + 3 =$

C $5 + 2 + 5 =$

E $8 + 2 + 7 =$

B $7 + 3 + 1 =$

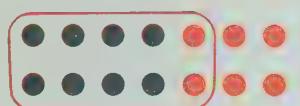
D $9 + 6 + 1 =$

F $5 + 1 + 9 =$

2. Study each picture carefully. Then give the missing number in each

A To add 8 and 6,

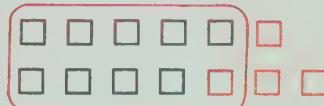
Think:



$$\begin{array}{r} 10 + 4 \\ 8 + 6 = \boxed{} \end{array}$$

B To add 9 and 4,

Think:



$$\begin{array}{r} 10 + 4 \\ 9 + 4 = \boxed{} \end{array}$$

C To add 6 and 5,

Think:



$$\begin{array}{r} 10 + 1 \\ 6 + 5 = \boxed{} \end{array}$$

D To add 7 and 7,

Think:



$$\begin{array}{r} 10 + 4 \\ 7 + 7 = \boxed{} \end{array}$$

3. Give the missing number in each . Then find the sum.

A $8 + 4 = 10 +$

$$8 + 4 = \underline{\hspace{2cm}}$$

C ~~$8 + 6 = 10 +$~~

$$8 + 6 = \underline{\hspace{2cm}}$$

E $9 + 7 = 10 +$

$$9 + 7 = \underline{\hspace{2cm}}$$

B $9 + 5 = 10 +$

$$9 + 5 = \underline{\hspace{2cm}}$$

D $7 + 8 = 10 +$

$$7 + 8 = \underline{\hspace{2cm}}$$

F $6 + 9 = 10 +$

$$6 + 9 = \underline{\hspace{2cm}}$$

4. A Since $5 + 5 =$,

we know $5 + 6 =$.

B Since $8 + 8 =$.

we know $8 + 9 =$.

5. Complete the table.

+	5	6	7	8	9
7					
8					
9					

To find $12 - 7$, it helps to think →

“What number plus 7 equals 12?”

You can find
this difference

$$12 - 7 = \square$$

when you find
this addend. → $\square + 7 = 12$

$$\square + 7 = 12$$



1. Write the missing numbers in the equations above.

2. Write the correct number in each \square .

A $\square + 5 = 9$

C $\square + 8 = 13$

E $\square + 9 = 14$

$$9 - 5 = \square$$

$$13 - 8 = \square$$

$$14 - 9 = \square$$

B $\square + 7 = 10$

D $\square + 7 = 15$

F $\square + 8 = 17$

$$10 - 7 = \square$$

$$15 - 7 = \square$$

$$17 - 8 = \square$$

3. Write the missing numbers.

A To find $14 - 5$, it helps to think $\square + 5 = 14$. $14 - 5 = \square$

B To find $13 - 9$, it helps to think $\square + 9 = 13$. $13 - 9 = \square$

C To find $15 - 8$, it helps to think $\square + 8 = 15$. $15 - 8 = \square$

4. Write the missing numbers.

A Since $8 + 4 = 12$, we know that $12 - 4 = \square$ and $12 - 8 = \square$.

B Since $31 + 13 = 44$, we know that $44 - 13 = \square$ and $44 - 31 = \square$.

C Since $57 + 72 = 129$, we know that $129 - 57 = \square$ and $129 - 72 = \square$.

1. Make each equation true by writing 1, 2, 3, 4, 5, 6, 7, 8, or 9 in the boxes. Each equation should be different.

A $\boxed{\quad} + \boxed{\quad} = 13$

B $\boxed{\quad} + \boxed{\quad} = 14$

C $\boxed{\quad} + \boxed{\quad} = 15$

$\boxed{\quad} + \boxed{\quad} = 13$

$\boxed{\quad} + \boxed{\quad} = 14$

$\boxed{\quad} + \boxed{\quad} = 15$

$\boxed{\quad} + \boxed{\quad} = 13$

$\boxed{\quad} + \boxed{\quad} = 14$

$\boxed{\quad} + \boxed{\quad} = 15$

$\boxed{\quad} + \boxed{\quad} = 13$

$\boxed{\quad} + \boxed{\quad} = 14$

$\boxed{\quad} + \boxed{\quad} = 15$

$\boxed{\quad} + \boxed{\quad} = 13$

$\boxed{\quad} + \boxed{\quad} = 14$

$\boxed{\quad} + \boxed{\quad} = 13$

$\boxed{\quad} + \boxed{\quad} = 14$

$\boxed{\quad} + \boxed{\quad} = 13$

2. Study example A. For part B write four equations that have a difference of 9. Complete C and D.

A $16 - 9 = 7$

B $17 - 8 = 9$

C $15 - 9 = 6$

D $17 - 9 = 8$

$15 - 8 = 7$ _____

$14 - 7 = 7$ _____

$13 - 6 = 7$ _____

$12 - 5 = 7$ _____

3. Add. Part of exercise A is worked as an example. Complete it and then work exercises B and C.

A

10	13	14
4	5	9
15	9	6
14		15

B

6	8	
4	7	

C

5	7	
9	6	

Write an addition or subtraction equation for each problem. Then complete the sentence.

1. Julie bought a 5¢ stamp and a 4¢ stamp. How much did she spend?

$$\underline{5 + 4 =}$$

Julie spent _____ cents.

2. Ted had 10 marbles. He lost 4 of them. How many marbles were left?

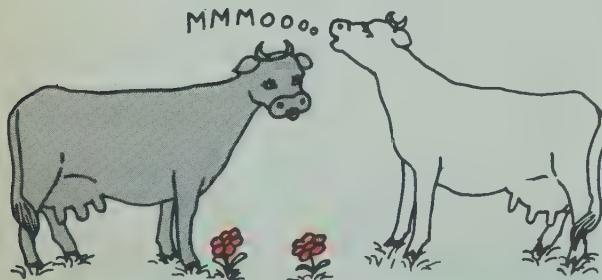
$$\underline{10 - 4 =}$$

Ted had _____ marbles left.

3. Mr. Carr had 8 cows. He bought 7 more. How many cows did Mr. Carr have then?

$$\underline{8 + =}$$

Mr. Carr had _____ cows in all.



4. There are 11 players on a soccer team and 5 players on a basketball team. How many more players are on a soccer team?

$$\underline{11 - =}$$

There are _____ more players on a soccer team than on a basketball team.

5. Jill spent 9 cents for candy and 7 cents for gum. How much did she spend?

$$\underline{\hspace{2cm}}$$

Jill spent _____ cents in all.



6. Sam had 15 baseball cards. Tom had 6 cards. How many more cards did Sam have?

$$\underline{\hspace{2cm}}$$

Sam had _____ more cards than Tom.

Solve each short story problem.

1. 9 cats. 4 dogs.

How many animals? _____

2. Had 5 cents. Candy costs 10 cents.

Need _____ more cents.

3. Had 7 hamsters. 6 more were born.

Had _____ hamsters in all.

4. 8 girls. 9 boys. How many children? _____

5. 6 horses. 14 boys. How many more boys than horses? _____

6. 19 pennies. Lost 9. How many were left? _____

1. Write two addition and two subtraction equations for this set.

★ ★ ~~o o~~ ~~o o~~

★ ★ ~~o o~~

★ ★ ~~o o~~ ~~o o~~

$$\underline{\quad} + \underline{\quad} = \underline{\quad}$$

$$\underline{\quad} - \underline{\quad} = \underline{\quad}$$

$$\underline{\quad} + \underline{\quad} = \underline{\quad}$$

$$\underline{\quad} - \underline{\quad} = \underline{\quad}$$

2. 

A Write an addition equation for the colored jumps. _____

B Write a subtraction equation for the black jumps. _____

3. Find the sums.

A $3 + 2 + 4 = \boxed{\quad}$

B $5 + 2 + 3 = \boxed{\quad}$

C $6 + 3 + 5 = \boxed{\quad}$

4. Find the sums and differences.

A $\begin{array}{r} 6 \\ + 4 \\ \hline \end{array}$

B $\begin{array}{r} 6 \\ + 7 \\ \hline \end{array}$

C $\begin{array}{r} 7 \\ + 6 \\ \hline \end{array}$

D $\begin{array}{r} 9 \\ + 8 \\ \hline \end{array}$

E $\begin{array}{r} 8 \\ + 9 \\ \hline \end{array}$

F $\begin{array}{r} 9 \\ + 4 \\ \hline \end{array}$

G $\begin{array}{r} 7 \\ + 8 \\ \hline \end{array}$

H $\begin{array}{r} 5 \\ + 8 \\ \hline \end{array}$

J $\begin{array}{r} 10 \\ - 6 \\ \hline \end{array}$

K $\begin{array}{r} 13 \\ - 7 \\ \hline \end{array}$

L $\begin{array}{r} 13 \\ - 6 \\ \hline \end{array}$

M $\begin{array}{r} 17 \\ - 8 \\ \hline \end{array}$

N $\begin{array}{r} 17 \\ - 9 \\ \hline \end{array}$

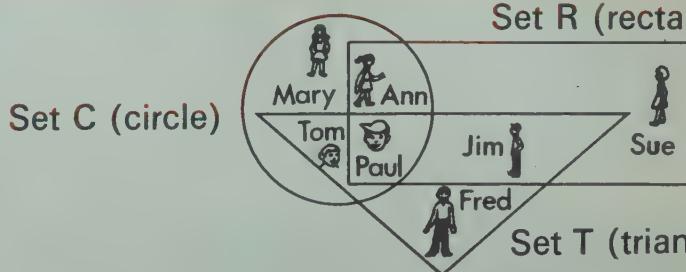
O $\begin{array}{r} 15 \\ - 7 \\ \hline \end{array}$

P $\begin{array}{r} 13 \\ - 8 \\ \hline \end{array}$

Q $\begin{array}{r} 15 \\ - 6 \\ \hline \end{array}$

CHANGE OF PACE

Set C (circle)



Set R (rectangle)

Set T (triangle)

1. Which children are in set C? _____

2. Which children are in set R? _____

3. Which children are in set T? _____

4. Which children are in both set C and set R? _____

5. Which child is in all 3 sets? _____

6. Which child is in set T but not in set C or set R? _____

1. Use the points at the right to draw the segments named below. Part A is an example for you to follow.

A \overline{AB}

D \overline{GH}

B \overline{CD}

E \overline{IJ}

C \overline{EF}

F \overline{KL}



• I

• F

• J

• D

• L

G • K

C •

• H

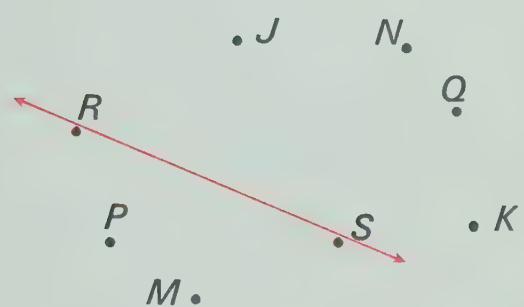
2. Use the points to the right to draw the lines named below. Part A has been completed.

A \overleftrightarrow{RS}

C \overleftrightarrow{MN}

B \overleftrightarrow{PQ}

D \overleftrightarrow{JK}



3. Draw each of the rays named below. Part A has been completed.

A \overrightarrow{OP}

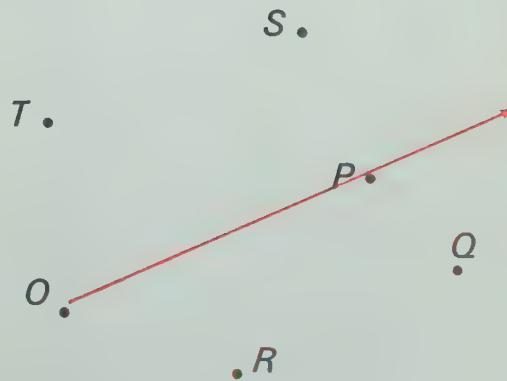
D \overrightarrow{OS}

B \overrightarrow{OQ}

E \overrightarrow{OT}

C \overrightarrow{OR}

F \overrightarrow{PS}



4. Write the name (ray, line, or segment) for each figure shown below.

A \overrightarrow{YZ}

B \overrightarrow{WX}

C \overrightarrow{RK}

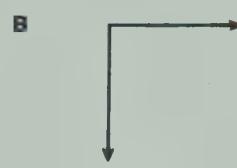
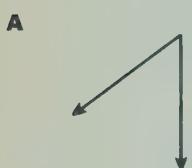
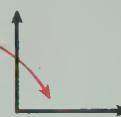
1. A   

Draw \overrightarrow{AB} .
Draw \overrightarrow{AC} .
You have drawn $\angle ABC$.

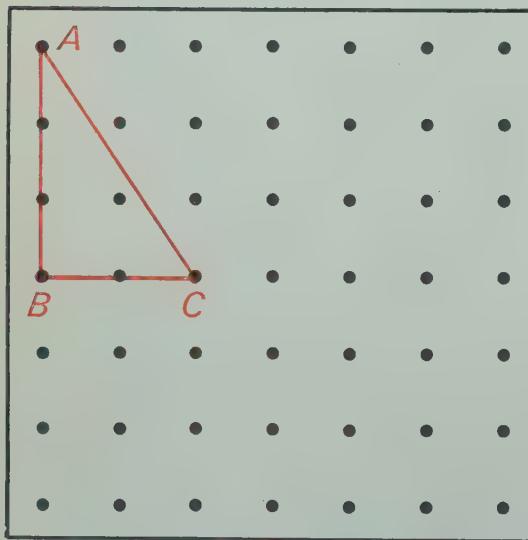
B   

Draw \overrightarrow{RT} .
Draw \overrightarrow{RS} .
You have drawn \angle _____.

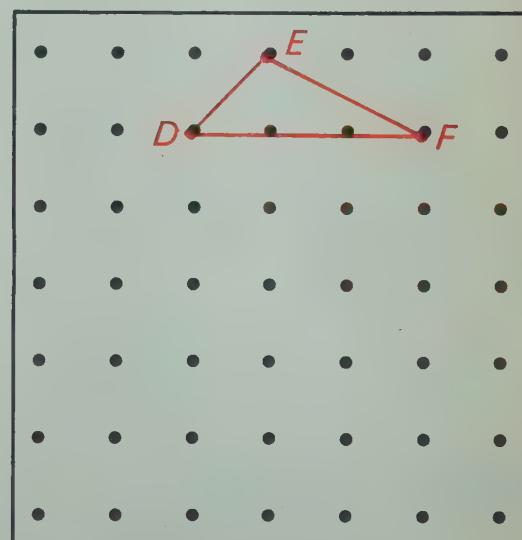
2. This is a **right angle**.
Place a \checkmark inside the angles
below that are right angles.



3. A Triangle ABC is a **right triangle**.
It contains a right angle. Use
the dot paper below and a
ruler to draw a larger right
triangle.



B Triangle DEF contains no right
angles. Use the dot paper
below and a ruler to draw
a triangle larger than $\triangle DEF$
but having the same shape.



4. A How many of these 

are in the figure? _____

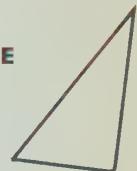
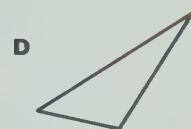
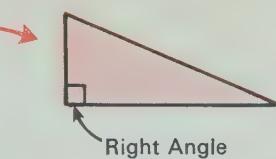


B How many triangles of **any size**
are in this figure? _____

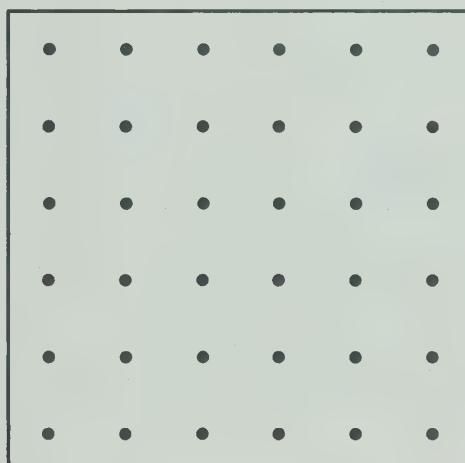


1. This is a right triangle.

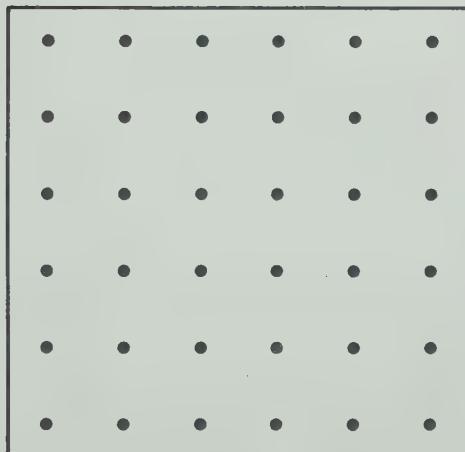
Place a ✓ inside the triangles that are right triangles.



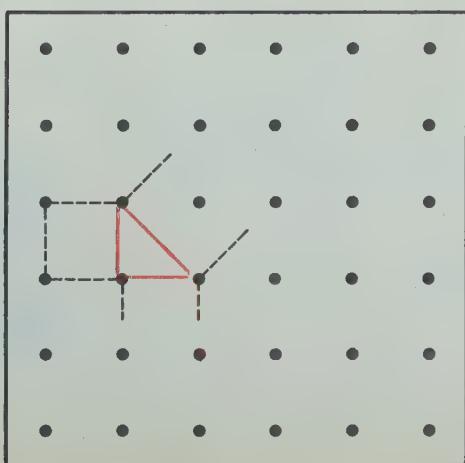
2. Draw a right triangle such that each side of the triangle is of a different length.



3. Draw a right triangle having two sides of the same length.



4. Finish drawing the squares on the leg and the hypotenuse of the colored triangle.



1.



A How many vertices (corners) does the box have? _____

B How many flat surfaces? _____

3. Use the points at the right to draw the following figures:

A \overline{AB}

B \overleftrightarrow{MN}

C \overrightarrow{RS}

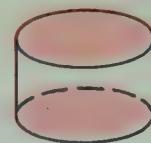
4. Place a \checkmark inside the angles that are right angles.



6. How many segments are shown in this figure? _____

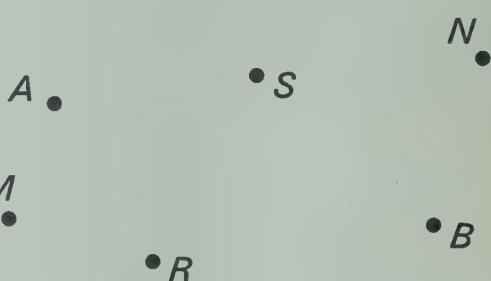


2.

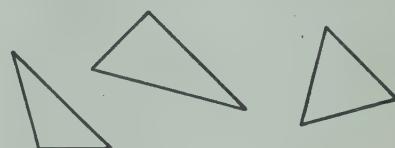


A How many flat surfaces does the can have? _____

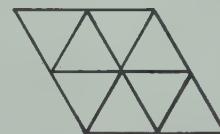
B How many curved surfaces? _____



5. Place a \checkmark inside the triangles that are right triangles.



7. How many triangles of any size are shown in this figure? _____



CHANGE of PACE

Each of the geometric figures below appears in the picture. Find and label the geometric figures in the picture.



Circle



Triangle



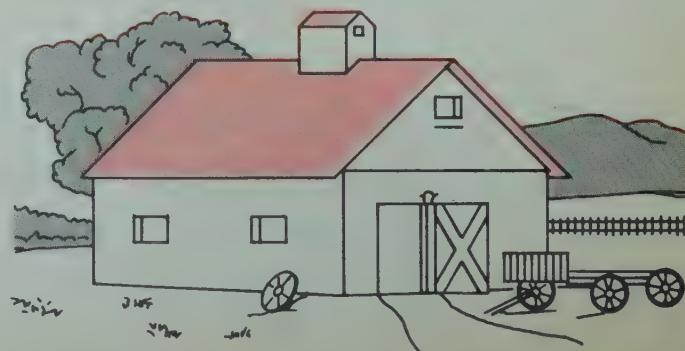
Square



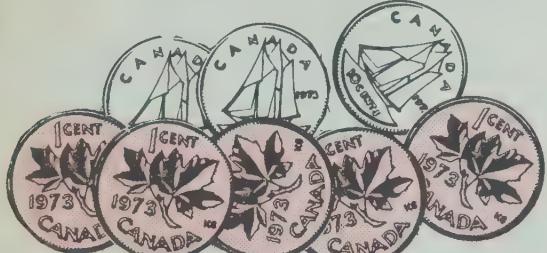
Parallelogram



Rectangle



A



C



B



D



1. Give the value of each coin collection.

A A _____

B B _____

C C _____

D D _____

2. Give the total value of each pair of coin collections.

A A and B _____

C A and D _____

E B and C _____

B A and C _____

D C and D _____

F B and D _____

3. Ring the letter of the coin collection that has the greater value.

A A or B

B A or D

C B or C

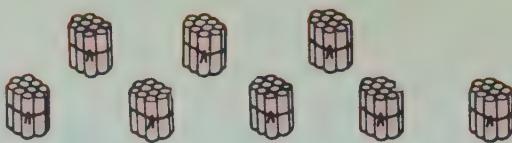
D B or D

4. Ann had the amount in collection B. She spent 12¢. How much did she have left?

5. Tom had the amount in collection C. He spent 15¢. How much did he have left?

6. Bill had the amount in collection D. He lost 2 dimes and a penny. How much did he have left?

1. $30 = \underline{\hspace{2cm}}$ tens

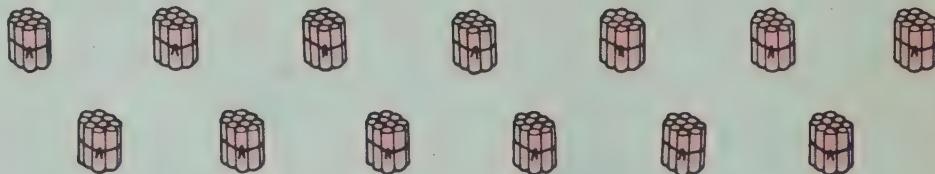


$50 = \underline{\hspace{2cm}}$ tens

3 tens together with 5 tens make $\underline{\hspace{2cm}}$ tens.

Since $3 + 5 = \underline{\hspace{2cm}}$, we know that $30 + 50 = \underline{\hspace{2cm}}$.

2. $70 = \underline{\hspace{2cm}}$ tens



7 tens together with 6 tens make $\underline{\hspace{2cm}}$ tens.

Since $7 + 6 = \underline{\hspace{2cm}}$, we know that $70 + 60 = \underline{\hspace{2cm}}$.

3. Find the sums.

A Since $1 + 8 = 9$, we know that $10 + 80 = \underline{\hspace{2cm}}$.

B Since $3 + 4 = \underline{\hspace{2cm}}$, we know that $30 + 40 = \underline{\hspace{2cm}}$.

C Since $4 + 9 = \underline{\hspace{2cm}}$, we know that $40 + 90 = \underline{\hspace{2cm}}$.

D Since $7 + 8 = \underline{\hspace{2cm}}$, we know that $70 + 80 = \underline{\hspace{2cm}}$.

4. Find the sums.

A
$$\begin{array}{r} 30 \\ + 20 \\ \hline \end{array}$$

B
$$\begin{array}{r} 20 \\ + 70 \\ \hline \end{array}$$

C
$$\begin{array}{r} 70 \\ + 30 \\ \hline \end{array}$$

D
$$\begin{array}{r} 90 \\ + 10 \\ \hline \end{array}$$

E
$$\begin{array}{r} 50 \\ + 70 \\ \hline \end{array}$$

F
$$\begin{array}{r} 40 \\ + 60 \\ \hline \end{array}$$

G
$$\begin{array}{r} 60 \\ + 80 \\ \hline \end{array}$$

H
$$\begin{array}{r} 80 \\ + 80 \\ \hline \end{array}$$

5. Find the sums.

A
$$\begin{array}{r} 4 \\ 3 \\ + 5 \\ \hline \end{array}$$

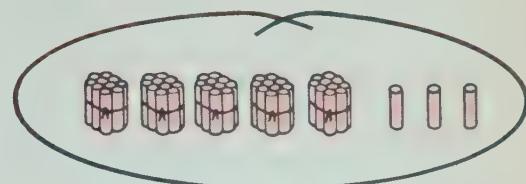
B
$$\begin{array}{r} 6 \\ 4 \\ + 7 \\ \hline \end{array}$$

C
$$\begin{array}{r} 8 \\ 2 \\ + 3 \\ \hline \end{array}$$

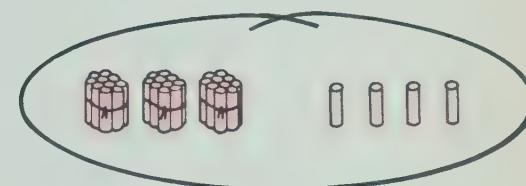
D
$$\begin{array}{r} 5 \\ 3 \\ + 7 \\ \hline \end{array}$$

1. A How many tens in set A? _____

Set A



Set B



B How many tens in set B? _____

Set A

C How many tens in set A and set B together? _____

Set A

D How many extra sticks in set A? _____

Set A

E How many extra sticks in set B? _____

Set B

F How many extra sticks in set A and set B together? _____

Set B

G Together, in sets A and B,

there are _____ tens and _____ extra sticks

for a total of _____ sticks.

H Looking at the sets, we see that $53 + 34 =$ _____.

2. Find the sums.

A
$$\begin{array}{r} 40 \\ + 30 \\ \hline \end{array} \quad \begin{array}{r} 7 \\ + 2 \\ \hline \end{array} \quad \begin{array}{r} 47 \\ + 32 \\ \hline \end{array}$$

B
$$\begin{array}{r} 50 \\ + 70 \\ \hline \end{array} \quad \begin{array}{r} 3 \\ + 6 \\ \hline \end{array} \quad \begin{array}{r} 53 \\ + 76 \\ \hline \end{array}$$

C
$$\begin{array}{r} 60 \\ + 40 \\ \hline \end{array} \quad \begin{array}{r} 5 \\ + 1 \\ \hline \end{array} \quad \begin{array}{r} 65 \\ + 41 \\ \hline \end{array}$$

D
$$\begin{array}{r} 80 \\ + 70 \\ \hline \end{array} \quad \begin{array}{r} 5 \\ + 2 \\ \hline \end{array} \quad \begin{array}{r} 85 \\ + 72 \\ \hline \end{array}$$

3. Find the sums.

A
$$\begin{array}{r} 20 \\ 20 \\ 20 \\ + 40 \\ \hline \end{array} \quad \begin{array}{r} 3 \\ 40 \\ 40 \\ + 5 \\ \hline \end{array} \quad \begin{array}{r} 23 \\ 23 \\ 23 \\ + 45 \\ \hline \end{array}$$

B
$$\begin{array}{r} 60 \\ 4 \\ 60 \\ + 30 \\ \hline \end{array} \quad \begin{array}{r} 64 \\ 30 \\ 30 \\ + 2 \\ \hline \end{array} \quad \begin{array}{r} 64 \\ 30 \\ 30 \\ + 2 \\ \hline \end{array} \quad \begin{array}{r} 64 \\ 32 \\ + 32 \\ \hline \end{array}$$

C
$$\begin{array}{r} 56 \\ + 23 \\ \hline \end{array} \quad \begin{array}{r} 23 \\ + 65 \\ \hline \end{array} \quad \begin{array}{r} 47 \\ + 31 \\ \hline \end{array}$$

F
$$\begin{array}{r} 82 \\ + 17 \\ \hline \end{array} \quad \begin{array}{r} 61 \\ + 25 \\ \hline \end{array} \quad \begin{array}{r} 438 \\ + 161 \\ \hline \end{array}$$

1. A How many tens in all? _____

B How many tens are crossed out? _____

C How many tens are left? _____

D How many extra sticks in all? _____

E How many extra sticks are crossed out? _____

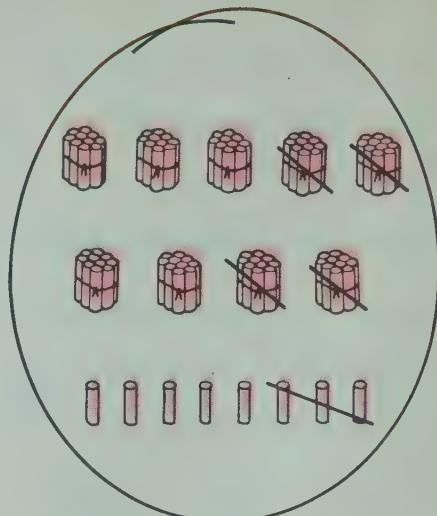
F How many extra sticks are left? _____

G How many sticks in all? _____

H How many sticks are crossed out? _____

I How many sticks are left? _____

J Looking at the set, we see that $98 - 43 =$ _____.



2. Find the differences.

A
$$\begin{array}{r} 80 \\ - 30 \\ \hline \end{array} \quad \begin{array}{r} 7 \\ - 3 \\ \hline \end{array} \quad \begin{array}{r} 87 \\ - 33 \\ \hline \end{array}$$

B
$$\begin{array}{r} 60 \\ - 40 \\ \hline \end{array} \quad \begin{array}{r} 9 \\ - 2 \\ \hline \end{array} \quad \begin{array}{r} 69 \\ - 42 \\ \hline \end{array}$$

C
$$\begin{array}{r} 120 \\ - 50 \\ \hline \end{array} \quad \begin{array}{r} 8 \\ - 2 \\ \hline \end{array} \quad \begin{array}{r} 128 \\ - 52 \\ \hline \end{array}$$

D
$$\begin{array}{r} 250 \\ - 230 \\ \hline \end{array} \quad \begin{array}{r} 7 \\ - 6 \\ \hline \end{array} \quad \begin{array}{r} 257 \\ - 236 \\ \hline \end{array}$$

3. Find the differences.

A
$$\begin{array}{r} 90 \\ - 40 \\ \hline \end{array} \quad \begin{array}{r} 97 \\ - 40 \\ \hline \end{array} \quad \begin{array}{r} 97 \\ - 45 \\ \hline \end{array}$$

B
$$\begin{array}{r} 150 \\ - 80 \\ \hline \end{array} \quad \begin{array}{r} 156 \\ - 80 \\ \hline \end{array} \quad \begin{array}{r} 156 \\ - 84 \\ \hline \end{array}$$

C
$$\begin{array}{r} 87 \\ - 14 \\ \hline \end{array} \quad \begin{array}{r} 64 \\ - 21 \\ \hline \end{array}$$

E
$$\begin{array}{r} 96 \\ - 73 \\ \hline \end{array}$$

F
$$\begin{array}{r} 75 \\ - 45 \\ \hline \end{array}$$

G
$$\begin{array}{r} 48 \\ - 36 \\ \hline \end{array}$$

H
$$\begin{array}{r} 174 \\ - 80 \\ \hline \end{array}$$

I
$$\begin{array}{r} 174 \\ - 84 \\ \hline \end{array}$$

J
$$\begin{array}{r} 129 \\ - 34 \\ \hline \end{array}$$

K
$$\begin{array}{r} 138 \\ - 77 \\ \hline \end{array}$$

L
$$\begin{array}{r} 169 \\ - 96 \\ \hline \end{array}$$

M
$$\begin{array}{r} 148 \\ - 93 \\ \hline \end{array}$$

N
$$\begin{array}{r} 137 \\ - 45 \\ \hline \end{array}$$

1. Put the correct mark (< or >) in each .

A 37  27

F 35  47

K 407  704

P 674  764

B 26  34

G 76  80

L 365  356

Q 20  19

C 10  100

H 89  90

M 87  78

R 856  865

D 99  100

I 41  14

N 100  89

S 90  89

E 58  85

J 30  200

O 99  101

T 644  466

2. Put the correct mark (< or >) in each .

A Since $7 + 5$  10 ,
we know that $17 + 5$  20 .

E Since $3 + 8$  10 ,
we know that $53 + 8$  60 .

B Since $8 + 4$  10 ,
we know that $28 + 4$  30 .

F Since $6 + 7$  10 ,
we know that $46 + 27$  70 .

C Since $5 + 4$  10 ,
we know that $75 + 4$  80 .

G Since $2 + 7$  10 ,
we know that $82 + 17$  100 .

D Since $6 + 5$  10 ,
we know that $36 + 5$  40 .

H Since $4 + 9$  10 ,
we know that $34 + 59$  90 .

3. Find the sums. Ring the smallest sum greater than 40.

A 35
 $+ 3$

B 35
 $+ 4$

C 35
 $+ 5$

D 35
 $+ 6$

E 35
 $+ 7$

F 35
 $+ 8$

G 35
 $+ 9$

4. Find the sums. Ring the smallest sum greater than 70.

A 67
 $+ 2$

B 67
 $+ 3$

C 67
 $+ 4$

D 67
 $+ 5$

E 67
 $+ 6$

F 67
 $+ 7$

G 67
 $+ 8$

5. Find the sums. Ring the smallest sum greater than 80.

A 56
 $+ 3$

B 56
 $+ 4$

C 56
 $+ 5$

D 56
 $+ 6$

E 56
 $+ 7$

F 56
 $+ 17$

G 56
 $+ 27$

1. Solve each equation.

6 + 8 = _____



40 + 20 = _____



14 + 60 = _____



2. Solve the equation. Then write the correct number in the

A 5 + 9 = _____

$$\begin{array}{r} 35 \\ 59 \\ \hline \end{array}$$

30 + 50 = _____

$$\begin{array}{r} 35 \\ 59 \\ \hline 14 \end{array}$$

14 + 80 = _____

$$\begin{array}{r} 35 \\ 59 \\ 14 \\ \hline 80 \end{array}$$

B 4 + 8 = _____

$$\begin{array}{r} 74 \\ 98 \\ \hline \end{array}$$

70 + 90 = _____

$$\begin{array}{r} 74 \\ 98 \\ \hline 12 \end{array}$$

12 + 160 = _____

$$\begin{array}{r} 74 \\ 98 \\ 12 \\ \hline 160 \end{array}$$

3. Find the sums.

A $\begin{array}{r} 54 \\ + 27 \\ \hline \end{array}$

B $\begin{array}{r} 36 \\ + 45 \\ \hline \end{array}$

C $\begin{array}{r} 78 \\ + 26 \\ \hline \end{array}$

D $\begin{array}{r} 29 \\ + 54 \\ \hline \end{array}$

E $\begin{array}{r} 63 \\ + 29 \\ \hline \end{array}$

F $\begin{array}{r} 98 \\ + 53 \\ \hline \end{array}$

G $\begin{array}{r} 74 \\ + 55 \\ \hline \end{array}$

H $\begin{array}{r} 66 \\ + 47 \\ \hline \end{array}$

I $\begin{array}{r} 58 \\ + 39 \\ \hline \end{array}$

J $\begin{array}{r} 47 \\ + 75 \\ \hline \end{array}$

K $\begin{array}{r} 37 \\ + 86 \\ \hline \end{array}$

L $\begin{array}{r} 96 \\ + 66 \\ \hline \end{array}$

● A Shortcut for Adding with Regrouping

1. Write the correct digit in each

A $6 + 8 = 14$

$$\begin{array}{r} 1 \\ 4 \ 6 \\ + 2 \ 8 \\ \hline 4 \end{array}$$

B $1 + 4 + 2 = 7$

$$\begin{array}{r} 1 \\ 4 \ 6 \\ + 2 \ 8 \\ \hline 7 \ 4 \end{array}$$

C $8 + 3 = 11$

$$\begin{array}{r} 5 \ 8 \\ + 3 \ 3 \\ \hline \end{array}$$

D $1 + 5 + 3 = 9$

$$\begin{array}{r} 5 \ 8 \\ + 3 \ 3 \\ \hline 1 \end{array}$$

E $9 + 3 = 12$

$$\begin{array}{r} 5 \ 9 \\ + 2 \ 3 \\ \hline \end{array}$$

F $1 + 5 + 2 = 8$

$$\begin{array}{r} 1 \\ 5 \ 9 \\ + 2 \ 3 \\ \hline 2 \end{array}$$

G $9 + 5 = 14$

$$\begin{array}{r} 6 \ 9 \\ + 3 \ 5 \\ \hline \end{array}$$

H $1 + 6 + 3 = 10$

$$\begin{array}{r} 1 \\ 6 \ 9 \\ + 3 \ 5 \\ \hline 4 \end{array}$$

I $7 + 8 = 15$

$$\begin{array}{r} 3 \ 9 \ 7 \\ + 4 \ 6 \ 8 \\ \hline \end{array}$$

J $1 + 9 + 6 = 16$

$$\begin{array}{r} 1 \\ 3 \ 9 \ 7 \\ + 4 \ 6 \ 8 \\ \hline 5 \end{array}$$

K $1 + 3 + 4 = 8$

$$\begin{array}{r} 1 \ 1 \\ 3 \ 9 \ 7 \\ + 4 \ 6 \ 8 \\ \hline 6 \ 5 \end{array}$$

2. Find the sums.

A 53

$$\begin{array}{r} + 27 \\ \hline \end{array}$$

B 73

$$\begin{array}{r} + 19 \\ \hline \end{array}$$

C 64

$$\begin{array}{r} + 29 \\ \hline \end{array}$$

D 45

$$\begin{array}{r} + 47 \\ \hline \end{array}$$

E 75

$$\begin{array}{r} + 16 \\ \hline \end{array}$$

F 86

$$\begin{array}{r} + 9 \\ \hline \end{array}$$

G 37

$$\begin{array}{r} + 56 \\ \hline \end{array}$$

H 64

$$\begin{array}{r} + 37 \\ \hline \end{array}$$

I 52

$$\begin{array}{r} + 29 \\ \hline \end{array}$$

J 73

$$\begin{array}{r} + 45 \\ \hline \end{array}$$

K 85

$$\begin{array}{r} + 38 \\ \hline \end{array}$$

L 74

$$\begin{array}{r} + 69 \\ \hline \end{array}$$

M 436

$$\begin{array}{r} + 57 \\ \hline \end{array}$$

N 295

$$\begin{array}{r} + 45 \\ \hline \end{array}$$

O 187

$$\begin{array}{r} + 376 \\ \hline \end{array}$$

P 575

$$\begin{array}{r} + 139 \\ \hline \end{array}$$

Q 367

$$\begin{array}{r} + 527 \\ \hline \end{array}$$

R 889

$$\begin{array}{r} + 54 \\ \hline \end{array}$$

S 296

$$\begin{array}{r} + 475 \\ \hline \end{array}$$

T 389

$$\begin{array}{r} + 126 \\ \hline \end{array}$$

U 366

$$\begin{array}{r} + 644 \\ \hline \end{array}$$

V 878

$$\begin{array}{r} + 736 \\ \hline \end{array}$$

W 388

$$\begin{array}{r} + 412 \\ \hline \end{array}$$

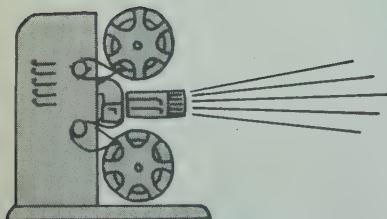
X 305

$$\begin{array}{r} + 208 \\ \hline \end{array}$$

1. Tom spent 36¢. He lost 53¢. Now he has no money left. With how much money did he start?

2. There are 25 children in Miss Black's class, 33 children in Mr. Judd's class, and 31 children in Mrs. King's class. How many children in all?

3. Roger has 97 hockey cards. Jim has 63 hockey cards. How many more cards does Roger have than Jim?



4. It took 12 minutes to get ready for the movie. The movie lasted 37 minutes and the students talked about it for 15 minutes. How long did it take in all?

5. It is 100 kilometres to River City. It is only 52 kilometres to Lake City. How much farther is it to River City?

6. Joe and Mike stepped on the scales. The scales read 87 kilograms. When Joe stepped off, the scales read 42 kilograms. How much does Joe weigh?



7. Give the missing numbers.

Function Rule

Double the number

Input	Output
25 cents	50 cents
117 days	234 days
36 centimetres	centimetres
60 minutes	minutes
66 kilometres	kilometres
258 metres	metres

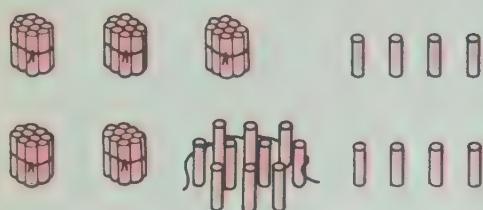
8. Cindy had 24 shells in her collection. She found 34 more shells. How many does she have?



9. Debbie bought a candy bar, an ice cream cone, and a bottle of pop. How much did she spend?

1. Study each picture carefully. Then write the correct numeral in each blank.

A

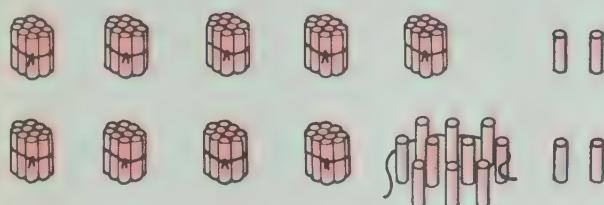


_____ tens and _____

2 tens and _____

$$34 = 20 + \underline{\quad}$$

B

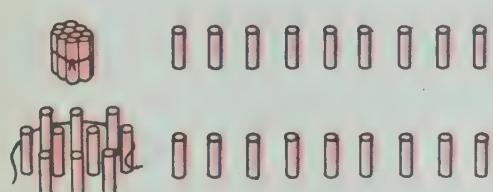


5 tens and _____

4 tens and _____

$$52 = 40 + \underline{\quad}$$

C

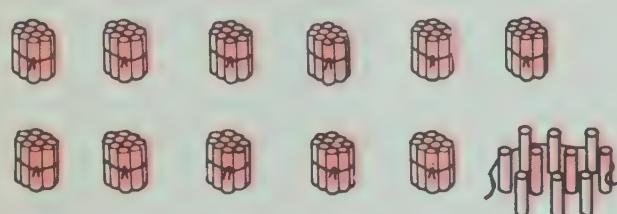


_____ tens and 9

0 tens and _____

$$\underline{\quad} = 10 + 9$$

D



6 tens and _____

5 tens and _____

$$60 = 50 + \underline{\quad}$$

2. Give the missing numbers.

A 43 is _____ tens and 3.

B 26 is _____ tens and 6.

43 is _____ tens and 13.

26 is _____ tens and 16.

3. Solve the equation.

A $75 = 60 + \underline{\quad}$

C $82 = 70 + \underline{\quad}$

E $63 = \underline{\quad} + 13$

B $48 = \underline{\quad} + 18$

D $37 = 20 + \underline{\quad}$

F $99 = \underline{\quad} + 19$

1. Give the missing addend in each \square .

A $38 = 30 + \square$

$38 = 20 + \square$

c $92 = 90 + \square$

$92 = 80 + \square$

e $66 = 60 + \square$

$66 = 50 + \square$

B $59 = 50 + \square$

$59 = 40 + \square$

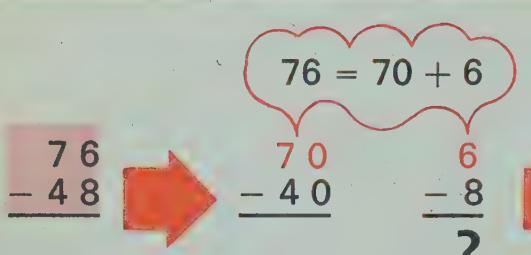
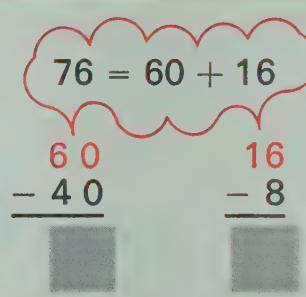
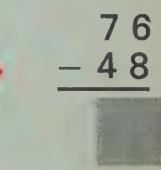
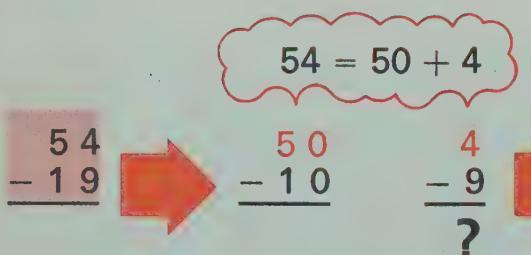
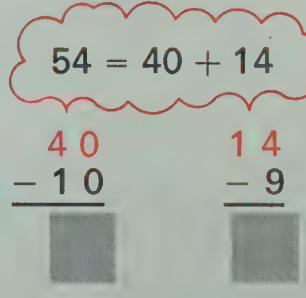
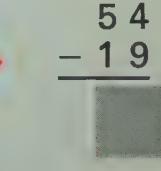
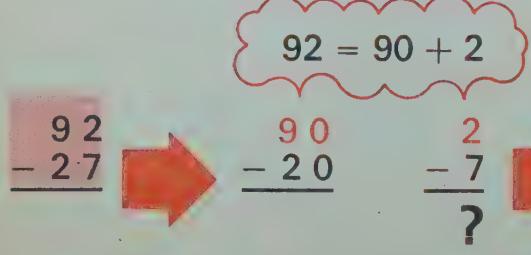
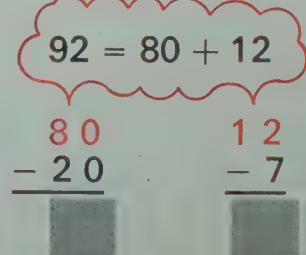
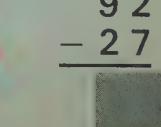
d $71 = 70 + \square$

$71 = 60 + \square$

f $40 = 40 + \square$

$40 = 30 + \square$

2. Find the difference for each \square .

Problem	Think	Regroup and Subtract	Difference
A	$76 = 70 + 6$ 	$76 = 60 + 16$ 	$\begin{array}{r} 76 \\ - 48 \\ \hline \end{array}$ 
B	$54 = 50 + 4$ 	$54 = 40 + 14$ 	$\begin{array}{r} 54 \\ - 19 \\ \hline \end{array}$ 
C	$92 = 90 + 2$ 	$92 = 80 + 12$ 	$\begin{array}{r} 92 \\ - 27 \\ \hline \end{array}$ 

● A Shortcut for Subtracting with Regrouping

1. Complete each exercise as in the example.

To think of 64 as $50 + 14$, we write $\cancel{5} \ 14$.

A To think of 35 as $20 + 15$, we write $\cancel{2} \ 5$.

B To think of 73 as $60 + 13$, we write $\cancel{6} \ 3$.

C To think of 56 as $40 + 16$, we write $\cancel{4} \ 6$.

2. Solve each equation. Then write the correct digit in each \square .

A $50 + 3 = 40 + \underline{\quad}$

$$\begin{array}{r} 4 \\ \cancel{5} \cancel{3} \\ - 2 7 \\ \hline \end{array}$$

$13 - 7 = \underline{\quad}$

$$\begin{array}{r} 4 13 \\ \cancel{5} \cancel{3} \\ - 2 7 \\ \hline \end{array}$$

$40 - 20 = \underline{\quad}$

$$\begin{array}{r} 4 13 \\ \cancel{5} \cancel{3} \\ - 2 7 \\ \hline 6 \end{array}$$

B

$490 + 5 = 480 + \underline{\quad}$

$$\begin{array}{r} 8 \\ 4 \cancel{9} \cancel{5} \\ - 1 5 6 \\ \hline \end{array}$$

$15 - 6 = \underline{\quad}$

$$\begin{array}{r} 8 15 \\ 4 \cancel{9} \cancel{5} \\ - 1 5 6 \\ \hline \end{array}$$

$80 - 50 = \underline{\quad}$

$$\begin{array}{r} 8 15 \\ 4 \cancel{9} \cancel{5} \\ - 1 5 6 \\ \hline 9 \end{array}$$

$400 - 100 = \underline{\quad}$

$$\begin{array}{r} 8 15 \\ 4 \cancel{9} \cancel{5} \\ - 1 5 6 \\ \hline 3 9 \end{array}$$

3. Find the differences.

A $\cancel{6} 2$

B $\cancel{7} 3$

C $\cancel{5} 4$

D $\cancel{9} 3$

E $\cancel{6} 5$

F $\cancel{8} 6$

G $\cancel{3} 7$

H $\cancel{3} 5 6$

I $\cancel{2} 4 3$

J $\cancel{6} 9 5$

K $\cancel{9} 8 4$

L $\cancel{5} 7 2$

M $\cancel{8} 5 1$

N $\cancel{3} 9 4$

1. Find the sums.

A
$$\begin{array}{r} 34 \\ + 25 \\ \hline \end{array}$$

B
$$\begin{array}{r} 64 \\ + 17 \\ \hline \end{array}$$

C
$$\begin{array}{r} 29 \\ + 44 \\ \hline \end{array}$$

D
$$\begin{array}{r} 51 \\ 6 \\ + 2 \\ \hline \end{array}$$

E
$$\begin{array}{r} 34 \\ 8 \\ + 7 \\ \hline \end{array}$$

F
$$\begin{array}{r} 56 \\ 39 \\ + 8 \\ \hline \end{array}$$

G
$$\begin{array}{r} 27 \\ 63 \\ + 42 \\ \hline \end{array}$$

2. Find the differences.

A
$$\begin{array}{r} 39 \\ - 21 \\ \hline \end{array}$$

B
$$\begin{array}{r} 94 \\ - 32 \\ \hline \end{array}$$

C
$$\begin{array}{r} 87 \\ - 57 \\ \hline \end{array}$$

D
$$\begin{array}{r} 77 \\ - 18 \\ \hline \end{array}$$

E
$$\begin{array}{r} 68 \\ - 49 \\ \hline \end{array}$$

F
$$\begin{array}{r} 123 \\ - 85 \\ \hline \end{array}$$

G
$$\begin{array}{r} 483 \\ - 169 \\ \hline \end{array}$$

Solve each story problem.

1. Fred weighs 32 kilograms.
Jan weighs 33 kilograms.
What is their total weight?

4. Baked 24 cup cakes.
Ate 17 of them.
How many left?

2. The total weight of Alice and Linda is 122 kilograms. If Alice only weighs 58 kilograms, how much does Linda weigh?

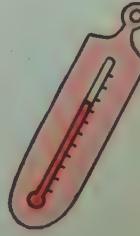
5. I took 32 minutes to show the first movie and 24 minutes to show the second movie.
How much longer did it take to show the first movie?

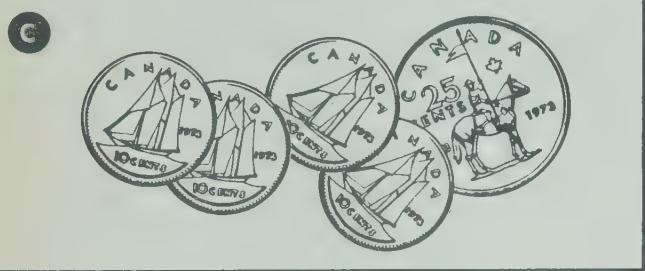


3. A litre contains 8 glasses. 2 cups contains 1 glass.
How many glasses in 1 litre and 2 cups?



6. On Monday the noon temperature was 24 °C degrees. On Tuesday it was 31 °C.
How much hotter was it on Tuesday?





4. Give the missing numbers.

A \$8.25 means _____ dollars and 25 cents.
 B \$3.15 means _____ dollars and 15 cents.
 C \$5.75 means 5 dollars and _____ cents.
 D \$6.98 means _____ dollars and _____ cents.
 E \$.35 means _____ dollars and _____ cents.

5. Give the number of cents for each amount.

A \$1 is _____ cents.	D \$7 is _____ cents.
B \$2 is _____ cents.	E \$1.35 is _____ cents.
C \$4 is _____ cents.	F \$4.63 is _____ cents.

6. Give the number of dollars and cents for each amount.

A For 100 cents, we write _____. B For 254 cents, we write _____.

7. Find the total amounts.

A \$6.22 1.73	B \$3.61 .29	C \$7.07 6.54
------------------	-----------------	------------------

8. Find the difference in the amounts.

A \$8.89 4.35	B \$10.62 7.28	C \$15.75 4.99
------------------	-------------------	-------------------

1. Find the sums and differences.

A
$$\begin{array}{r} 50 \\ + 40 \\ \hline \end{array}$$

B
$$\begin{array}{r} 170 \\ - 80 \\ \hline \end{array}$$

C
$$\begin{array}{r} 79 \\ - 23 \\ \hline \end{array}$$

D
$$\begin{array}{r} 64 \\ + 23 \\ \hline \end{array}$$

E
$$\begin{array}{r} 87 \\ + 9 \\ \hline \end{array}$$

F
$$\begin{array}{r} 64 \\ + 8 \\ \hline \end{array}$$

G
$$\begin{array}{r} 73 \\ - 7 \\ \hline \end{array}$$

H
$$\begin{array}{r} 86 \\ - 9 \\ \hline \end{array}$$

I
$$\begin{array}{r} 27 \\ + 8 \\ \hline \end{array}$$

J
$$\begin{array}{r} 37 \\ + 96 \\ \hline \end{array}$$

K
$$\begin{array}{r} 45 \\ - 16 \\ \hline \end{array}$$

L
$$\begin{array}{r} 69 \\ + 54 \\ \hline \end{array}$$

M
$$\begin{array}{r} 86 \\ - 19 \\ \hline \end{array}$$

N
$$\begin{array}{r} 459 \\ + 37 \\ \hline \end{array}$$

O
$$\begin{array}{r} 47 \\ - 29 \\ \hline \end{array}$$

P
$$\begin{array}{r} 56 \\ + 84 \\ \hline \end{array}$$

Q
$$\begin{array}{r} 183 \\ - 47 \\ \hline \end{array}$$

R
$$\begin{array}{r} 562 \\ - 328 \\ \hline \end{array}$$

2. Give the correct mark (< or >) for each.

A 53 43

C 89 98

B 27 72

D 199 200

E $57 + 63$ $57 + 64$

3. Judy's score is 91. Sandra's score is 69. How much greater is Judy's score? _____

4. Ted bought a game for 98¢ and a Yo-Yo for 65¢. What was the total cost? _____

CHANGE of PACE

For each **magic square** below, find the sum of the 3 numbers along each arrow.

1.

10	5	6
3	7	11
8	9	4

21

2.

4	9	2
3	5	7
8	1	6

3.

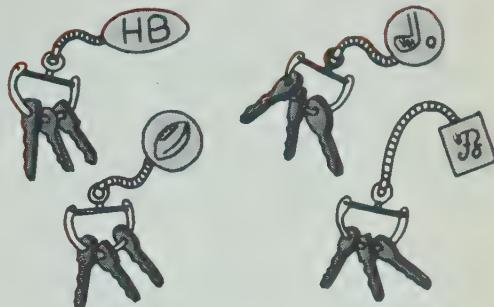
5	9	10
13	8	3
6	7	11

4.

5	8	5
6	6	6
7	4	7

1. A There are _____ sets of keys.
 B There are _____ keys in each set.
 C There are _____ keys in all.
 D To tell how many in 4 sets of 3, we write the multiplication equation

$$\underline{4 \times 3 = 12}$$

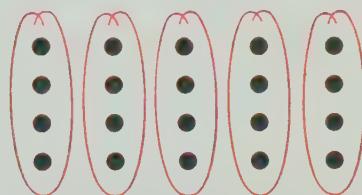


2. A There are _____ race cars.
 B There are _____ wheels on each car.
 C There are _____ wheels in all.
 D To tell how many in 3 sets of 4, we write the multiplication

equation $\underline{3 \times \underline{\hspace{2cm}} = \underline{\hspace{2cm}}}$.

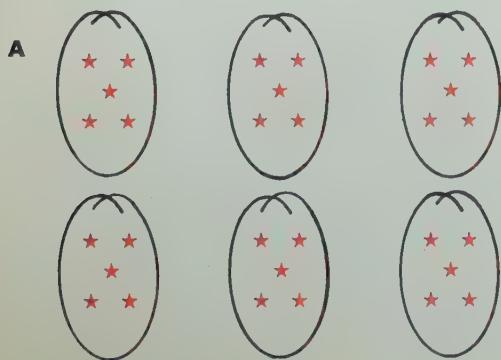


3. A There are _____ sets of four dots.
 B There are _____ dots in all.
 C $5 \times 4 = \underline{\hspace{2cm}}$

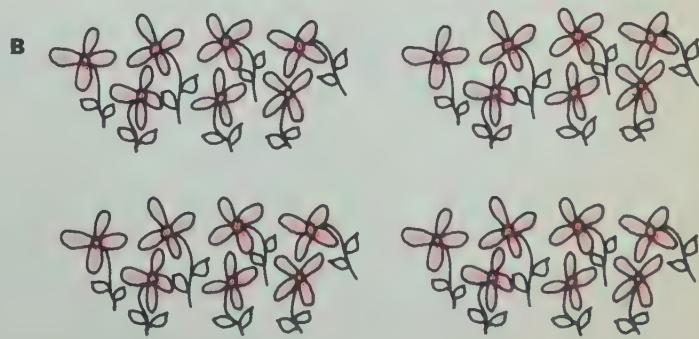


$$4 + 4 + 4 + 4 + 4 = \underline{\hspace{2cm}}$$

4. Write a multiplication equation for each set.

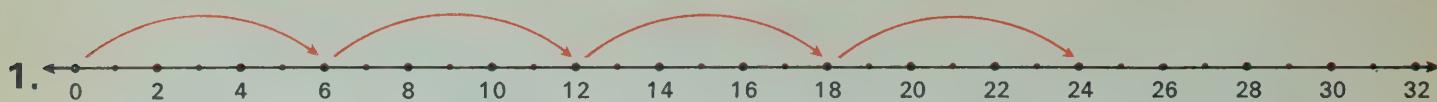


$$\underline{\hspace{2cm}} \times \underline{\hspace{2cm}} = \underline{\hspace{2cm}}$$



$$\underline{\hspace{2cm}} \times \underline{\hspace{2cm}} = \underline{\hspace{2cm}}$$

● *Multiplication on the Number Line*



The picture above shows _____ jumps. Each jump is _____ units long.

These jumps end at _____.

$$4 \times 6 = \boxed{\quad}$$



_____ jumps, _____ units each, end at _____.

$$5 \times \boxed{\quad} = \boxed{\quad}$$



_____ jumps, _____ units each, end at _____.

$$\boxed{\quad} \times \boxed{\quad} = \boxed{\quad}$$

For Exercises 4 through 7, complete the number-line jumps and solve the equations.



$$4 \times 8 = \boxed{\quad}$$



$$7 \times 4 = \boxed{\quad}$$

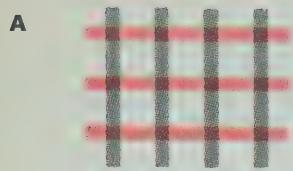


$$8 \times 5 = \boxed{\quad}$$



$$4 \times 9 = \boxed{\quad}$$

1. Give the missing numbers. Then solve the equation.



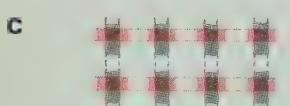
3 rows
4 columns
12 crosses

$$3 \times 4 = \boxed{\quad}$$



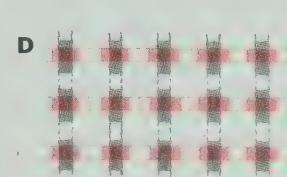
2 rows
5 columns
10 crosses

$$2 \times 5 = \boxed{\quad}$$



2 rows
4 columns
8 crosses

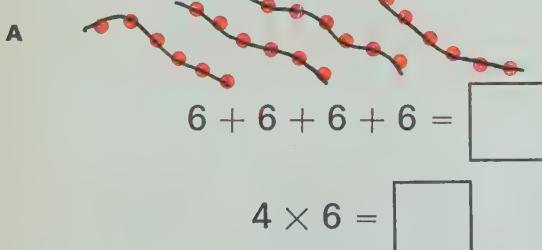
$$2 \times 4 = \boxed{\quad}$$



3 rows
7 columns
21 crosses

$$3 \times 7 = \boxed{\quad}$$

2. Solve the equations.



$$6 + 6 + 6 + 6 = \boxed{\quad}$$

$$4 \times 6 = \boxed{\quad}$$



$$5 + 5 + 5 + 5 + 5 = \boxed{\quad}$$

$$5 \times 5 = \boxed{\quad}$$



$$2 + 2 + 2 + 2 = \boxed{\quad}$$

$$4 \times 2 = \boxed{\quad}$$



$$3 + 3 + 3 + 3 + 3 + 3 + 3 = \boxed{\quad}$$

$$8 \times 3 = \boxed{\quad}$$

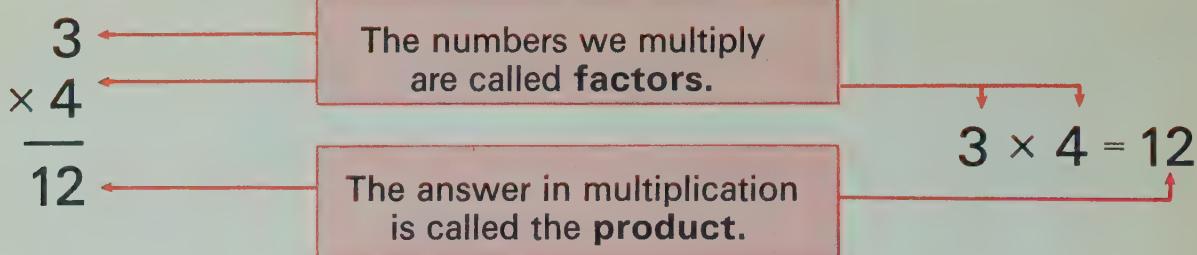
3. Write and solve one addition and one multiplication equation for each picture.



$$\underline{\quad} + \underline{\quad} = \underline{\quad}$$



$$\underline{\quad} + \underline{\quad} = \underline{\quad}$$



1. Write **F** or **P** in each blank to indicate if the numeral in red is a factor or a product.

A $4 \times 2 = 8$ _____

D $8 \times 3 = 24$ _____

B $3 \times 6 = 18$ _____

E $4 \times 4 = 16$ _____

C $9 \times 3 = 27$ _____

F $6 \times 1 = 6$ _____

2. Study each picture. Then solve each equation.



1 set of 4 stars

$$1 \times 4 = \boxed{}$$



3 sets of zero dots

$$3 \times 0 = \boxed{}$$



4 sets of 1 star

$$4 \times 1 = \boxed{}$$

0 sets of 3 dots

$$0 \times 3 = \boxed{}$$

The product of any number and 1 is the number itself.

The product of any number and 0 is 0.

3. Find the products.

A $9 \times 0 = \underline{\hspace{2cm}}$

D $1 \times 5 = \underline{\hspace{2cm}}$

G $0 \times 6 = \underline{\hspace{2cm}}$

B $1 \times 6 = \underline{\hspace{2cm}}$

E $0 \times 4 = \underline{\hspace{2cm}}$

H $23 \times 0 = \underline{\hspace{2cm}}$

C $0 \times 4 = \underline{\hspace{2cm}}$

F $84 \times 1 = \underline{\hspace{2cm}}$

I $1 \times 23 = \underline{\hspace{2cm}}$

4. Solve the equations.

A $13 \times \boxed{} = 13$

C $1 \times \boxed{} = 55$

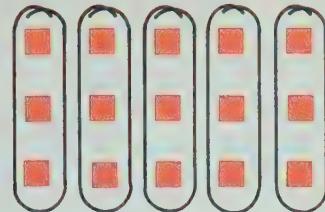
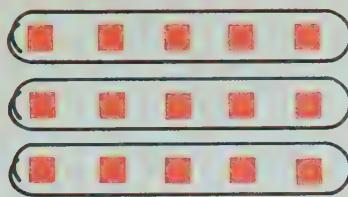
E $18 \times \boxed{} = 0$

B $\boxed{} \times 41 = 0$

D $\boxed{} \times 1 = 1$

F $1 \times \boxed{} = 0$

1.



Since $3 \times 5 = \boxed{\quad}$, we know that $5 \times 3 = \boxed{\quad}$.

When we change the **order** of the factors,
we get the same product.

2. Find the products.

A $3 \times 4 = \boxed{\quad}$

B $4 \times 3 = \boxed{\quad}$

C Since $7 \times 8 = 56$,
we know $8 \times 7 = \boxed{\quad}$.

3. Match the two columns.

8×4

82×36

16×3

57×8

3×16

4×8

8×57

36×82

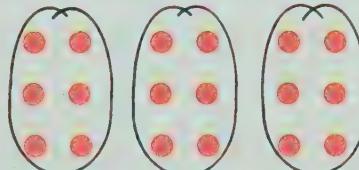
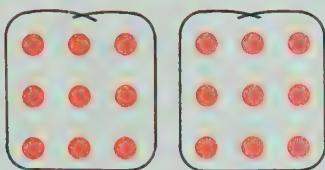
4. Solve the equations.

A $3 \times 27 = 27 \times \boxed{\quad}$

B $643 \times \boxed{\quad} = 9 \times 643$

C $56 \times 28 = \boxed{\quad} \times 56$

5.



Since $3 \times 3 \times 2 = \boxed{\quad}$, we know that $3 \times 3 \times 2 = \boxed{\quad}$.

When we change the **grouping** of the factors,
we get the same product.

6. Find the products.

A $(3 \times 2) \times 5$

$6 \times 5 = \underline{\quad}$

B $3 \times (2 \times 5)$

$3 \times 10 = \underline{\quad}$

C Since $(2 \times 7) \times 6 = 84$,

we know $2 \times (7 \times 6) = \underline{\quad}$.

7. Match the two columns.

$(1 \times 7) \times 2$

$5 \times (8 \times 4)$

$6 \times (3 \times 9)$

$(6 \times 9) \times 8$

$(6 \times 3) \times 9$

$1 \times (7 \times 2)$

$6 \times (9 \times 8)$

$(5 \times 8) \times 4$

8. Solve the equations.

A $(3 \times 8) \times 7 = 3 \times (8 \times \boxed{\quad})$

B $(5 \times 9) \times 6 = \boxed{\quad} \times (9 \times 6)$

C $4 \times (7 \times 3) = (4 \times 7) \times \boxed{\quad}$



6 pieces of candy
5¢ each

$$6 \times 5 = \boxed{\quad}$$

4 candy bars
5¢ each

$$(4 \times 5)$$

2 lollipops
5¢ each

$$+ (2 \times 5) = \boxed{\quad}$$

1. A Solve each equation above.

B Is it true that $6 \times 5 = (4 \times 5) + (2 \times 5)$? _____

2. Solve the equations. Answer the question.



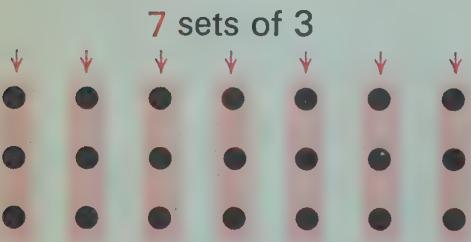
A $5 \times 4 = \boxed{\quad}$



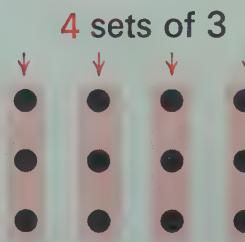
B $(3 \times 4) + (2 \times 4) = \boxed{\quad}$

C Is it true that $5 \times 4 = (3 \times 4) + (2 \times 4)$? _____

3. Solve the equations. Answer the question.



A $7 \times 3 = \boxed{\quad}$



B $(4 \times 3) + (3 \times 3) = \boxed{\quad}$

C Is it true that $7 \times 3 = (4 \times 3) + (3 \times 3)$? _____

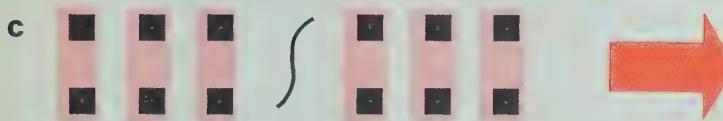
1. Give the missing number of twos.



For 6 sets of 2, we can think 5 twos and ____ two.



For 6 sets of 2, we can think 4 twos and ____ twos.



For 6 sets of 2, we can think 3 twos and ____ twos.

2. Give the missing number of threes. 8×3

- A For 8 threes, we can think 7 threes and ____ three.
- B For 8 threes, we can think 6 threes and ____ threes.
- C For 8 threes, we can think 5 threes and ____ threes.
- D For 8 threes, we can think 4 threes and ____ threes.

3. Give the missing number. Then solve the equation.

A 6 twos \rightarrow 4 twos and ____ twos

$$6 \times 2 = (4 \times 2) + (\boxed{} \times 2)$$

B 5 threes \rightarrow 3 threes and ____ threes

$$5 \times 3 = (3 \times 3) + (\boxed{} \times 3)$$

C 7 twos \rightarrow 6 twos and ____ two

$$7 \times 2 = (6 \times 2) + (\boxed{} \times 2)$$

D 6 fours \rightarrow 3 fours and ____ fours

$$6 \times 4 = (3 \times 4) + (\boxed{} \times 4)$$

E 5 sixes \rightarrow 3 sixes and ____ sixes

$$5 \times 6 = (3 \times 6) + (\boxed{} \times 6)$$

F 9 threes \rightarrow 5 threes and ____ threes

$$9 \times 3 = (5 \times 3) + (\boxed{} \times 3)$$

“0” facts

1. A Any number times 0 is _____.

B Fill in the 0 column.

C $1 \times 0 = \boxed{\quad} \rightarrow 0 \times 1 = \boxed{\quad}$

D $2 \times 0 = \boxed{\quad} \rightarrow 0 \times 2 = \boxed{\quad}$

E Use the products you wrote in the 0 column to help you fill in the 0 row.

“1” facts

2. A Any number times ___ is itself.

B Fill in the 1 column.

C $2 \times 1 = \boxed{\quad}$ D $3 \times 1 = \boxed{\quad}$

E Use the products you wrote in the 1 column to help you fill in the 1 row.

“2” facts

3. A $2 + 2 = \boxed{\quad} \rightarrow 2 \times 2 = \boxed{\quad}$

B $3 + 3 = \boxed{\quad} \rightarrow 2 \times 3 = \boxed{\quad}$

C $4 + 4 = \boxed{\quad} \rightarrow 2 \times 4 = \boxed{\quad}$

D $5 + 5 = \boxed{\quad} \rightarrow 2 \times 5 = \boxed{\quad}$

E $6 + 6 = \boxed{\quad} \rightarrow 2 \times 6 = \boxed{\quad}$

F $7 + 7 = \boxed{\quad} \rightarrow 2 \times 7 = \boxed{\quad}$

G $8 + 8 = \boxed{\quad} \rightarrow 2 \times 8 = \boxed{\quad}$

H $9 + 9 = \boxed{\quad} \rightarrow 2 \times 9 = \boxed{\quad}$

MULTIPLICATION TABLE

	0 col	1 col	2 col	3 col							
0 row	×	0	1	2	3	4	5	6	7	8	9
1 row	0										
2 row	1										
3 row	2										
4 row	3										
5 row	4										
6 row	5										
7 row	6										
8 row	7										
9 row	8										
10 row	9										

“3” facts

5. A $2 \times 3 = \boxed{\quad} \rightarrow 3 \times 3 = \boxed{\quad}$

B $2 \times 4 = \boxed{\quad} \rightarrow 3 \times 4 = \boxed{\quad}$

C $2 \times 5 = \boxed{\quad} \rightarrow 3 \times 5 = \boxed{\quad}$

D $2 \times 6 = \boxed{\quad} \rightarrow 3 \times 6 = \boxed{\quad}$

E $2 \times 7 = \boxed{\quad} \rightarrow 3 \times 7 = \boxed{\quad}$

F $2 \times 8 = \boxed{\quad} \rightarrow 3 \times 8 = \boxed{\quad}$

G $2 \times 9 = \boxed{\quad} \rightarrow 3 \times 9 = \boxed{\quad}$

4. Fill in the 2 column and the 2 row of the table.

6. Fill in the 3 column and the 3 row of the table.

"4" facts

A $2 \times 4 =$ $\rightarrow 4 \times 4 =$

B $2 \times 5 =$ $\rightarrow 4 \times 5 =$

C $2 \times 6 =$ $\rightarrow 4 \times 6 =$

D $2 \times 7 =$ $\rightarrow 4 \times 7 =$

E $2 \times 8 =$ $\rightarrow 4 \times 8 =$

F $2 \times 9 =$ $\rightarrow 4 \times 9 =$

2. Fill in the lighter colored portion of the **4 row** of the table at the right.

3. Use the products you wrote in the **4 row** to fill in the **4 column**.

"5" facts

4. Count by fives to fill in the gray boxes below. Then solve the equations.

5	$1 \times 5 = 5$	$6 \times 5 =$ <input type="text"/>
10	$2 \times 5 = 10$	$7 \times 5 =$ <input type="text"/>
15	$3 \times 5 = 15$	$8 \times 5 =$ <input type="text"/>
20	$4 \times 5 = 20$	$9 \times 5 =$ <input type="text"/>
	$5 \times 5 =$ <input type="text"/>	

5. Fill in the darker colored portion of the **5 row** and the **5 column**.

MULTIPLICATION TABLE

\times	0	1	2	3	4	5	6	7	8	9
0	0	0	0	0	0	0	0	0	0	0
1	0	1	2	3	4	5	6	7	8	9
2	0	2	4	6	8	10	12	14	16	18
3	0	3	6	9	12	15	18	21	24	27
4	0	4	8	12	16	20	24	28	32	36
5	0	5	10	15	20	25	30	35	40	45
6	0	6	12	18	24	30	36	42	48	54
7	0	7	14	21	28	35	42	49	56	63
8	0	8	16	24	32	40	48	56	64	72
9	0	9	18	27	36	45	54	63	72	81

6. The "1," "2," and "3" facts can also help you with the "4" and "5" facts. Solve the equations.

A $5 \times 5 = (2 \times 5) + (\square \times 5)$

B $4 \times 8 = (\square \times 8) + (2 \times 8)$

C $5 \times 7 = (\square \times 7) + (4 \times 7)$

D $4 \times 9 = (1 \times 9) + (\square \times 9)$

E $5 \times 6 = (\square \times 6) + (3 \times 6)$

MULTIPLICATION TABLE

	6 col	7 col	8 col	9 col
6 row	0	1	2	3
7 row	1	2	3	4
8 row	2	3	4	5
9 row	3	4	5	6
×	0	1	2	3
0	0	0	0	0
1	0	1	2	3
2	0	2	4	6
3	0	3	6	9
4	0	4	8	12
5	0	5	10	15
6	0	6	12	18
7	0	7	14	21
8	0	8	16	24
9	0	9	18	27

“6” facts

1. A $3 \times 6 =$ $\rightarrow 6 \times 3 =$
 B $3 \times 7 =$ $\rightarrow 6 \times 7 =$
 C $3 \times 8 =$ $\rightarrow 6 \times 8 =$
 D $3 \times 9 =$ $\rightarrow 6 \times 9 =$

2. Fill in the **6 row** and the **6 column** of the table.

“7” facts

3. A $6 \times 7 =$ $\rightarrow 7 \times 6 =$
 B $6 \times 8 =$ $\rightarrow 7 \times 8 =$

C $6 \times 9 =$ $\rightarrow 7 \times 9 =$

D Fill in the rest of the **7 row** and **column** of the table.

“8” facts

4. A $4 \times 8 =$ $\rightarrow 8 \times 4 =$

B $4 \times 9 =$ $\rightarrow 8 \times 9 =$

Fill in the rest of the **8 row** and **column** in the table.

“9” facts

5. A $8 \times 9 =$ $\rightarrow 9 \times 8 =$

B Complete the table.

6. Find the products.

A
$$\begin{array}{r} 6 \\ \times 6 \\ \hline \end{array}$$

B
$$\begin{array}{r} 8 \\ \times 4 \\ \hline \end{array}$$

C
$$\begin{array}{r} 9 \\ \times 5 \\ \hline \end{array}$$

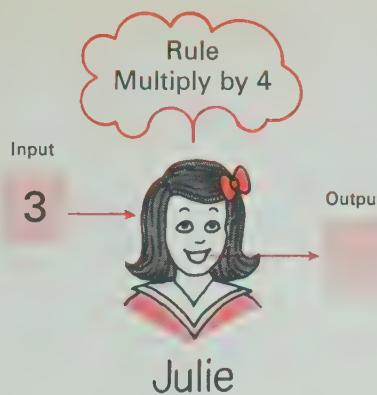
D
$$\begin{array}{r} 7 \\ \times 7 \\ \hline \end{array}$$

E
$$\begin{array}{r} 7 \\ \times 9 \\ \hline \end{array}$$

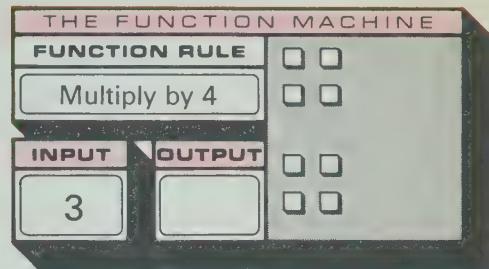
F
$$\begin{array}{r} 6 \\ \times 8 \\ \hline \end{array}$$

G
$$\begin{array}{r} 9 \\ \times 9 \\ \hline \end{array}$$

1. What output number should Julie give?



2. Write the correct output number on the function machine.



For exercises 3 through 10, give the missing numbers or function rules.

3. Function Rule

Multiply by 4	
	Input Output
A	3 12
B	5
C	9
D	8
E	6
F	4

4. Function Rule

Multiply by 5	
	Input Output
A	1 5
B	3
C	4
D	9
E	7
F	5

5. Function Rule

Multiply by 6	
	Input Output
A	0
B	5
C	3
D	9
E	4
F	7

6. Function Rule

	Input Output
A	2 14
B	5 35
C	3 21
D	8 56
E	4
F	7

7. Function Rule

Multiply by 8	
	Input Output
A	3
B	4
C	7
D	16
E	40
F	64

8. Function Rule

Multiply by 9	
	Input Output
A	1
B	2
C	3
D	4
E	5
F	6

9. Function Rule

Multiply by 0	
	Input Output
A	9
B	3
C	0
D	4
E	5
F	7

10. Function Rule

	Input Output
A	 3
B	2 6
C	3 9
D	7
E	8
F	9

Fill in each with a multiplication fact and each blank or box with a sum, difference, or product.

1. 1×2 2×2 3×2

2 **4**

2. 1×5 2×5 3×5

5 **20**

3. 1×9 2×9 3×9

9 **18** **36**

$$\begin{array}{r} 0 \\ + 9 \\ \hline 9 \end{array}$$

$$\begin{array}{r} 1 \\ + 8 \\ \hline 9 \end{array}$$

$$\begin{array}{r} 3 \\ + 6 \\ \hline 9 \end{array}$$

4. 1×1 2×2 3×3

1 **4** **9**

3 **5**

5. Complete the table.

\times	1	2	3	4	5	6	7	8	9
0									
3									
10									

1. Find the products.

A $\begin{array}{r} 7 \\ \times 0 \\ \hline \end{array}$

B $\begin{array}{r} 9 \\ \times 5 \\ \hline \end{array}$

C $\begin{array}{r} 6 \\ \times 1 \\ \hline \end{array}$

D $\begin{array}{r} 5 \\ \times 7 \\ \hline \end{array}$

E $\begin{array}{r} 1 \\ \times 4 \\ \hline \end{array}$

F $\begin{array}{r} 2 \\ \times 7 \\ \hline \end{array}$

G $\begin{array}{r} 7 \\ \times 8 \\ \hline \end{array}$

H $\begin{array}{r} 5 \\ \times 2 \\ \hline \end{array}$

I $\begin{array}{r} 4 \\ \times 7 \\ \hline \end{array}$

J $\begin{array}{r} 9 \\ \times 7 \\ \hline \end{array}$

K $\begin{array}{r} 3 \\ \times 6 \\ \hline \end{array}$

L $\begin{array}{r} 8 \\ \times 9 \\ \hline \end{array}$

M $\begin{array}{r} 8 \\ \times 8 \\ \hline \end{array}$

N $\begin{array}{r} 9 \\ \times 6 \\ \hline \end{array}$

2. Find the products.

A $8 \times 2 = \boxed{\quad}$

E $3 \times 5 = \boxed{\quad}$

I $5 \times 6 = \boxed{\quad}$

M $6 \times 6 = \boxed{\quad}$

B $5 \times 0 = \boxed{\quad}$

F $8 \times 7 = \boxed{\quad}$

J $7 \times 7 = \boxed{\quad}$

N $3 \times 9 = \boxed{\quad}$

C $8 \times 5 = \boxed{\quad}$

G $9 \times 4 = \boxed{\quad}$

K $2 \times 9 = \boxed{\quad}$

O $6 \times 7 = \boxed{\quad}$

D $9 \times 1 = \boxed{\quad}$

H $5 \times 8 = \boxed{\quad}$

L $7 \times 6 = \boxed{\quad}$

P $7 \times 5 = \boxed{\quad}$

3. Multiply.

A
$$\begin{array}{r} 15 \\ \hline 24 & 3 & 8 & 24 \\ \hline 10 & 2 & 5 \\ \hline 40 & 15 \end{array}$$

B
$$\begin{array}{r} \\ \hline & 4 & 5 \\ \hline & 0 & 3 \end{array}$$

C
$$\begin{array}{r} \\ \hline & 6 & 7 \\ \hline & 8 & 9 \end{array}$$

4. Give the missing numbers in the function tables.

Function Rule

Multiply by 7; then subtract 7

Input Output

A	2	
B	4	
C	5	
D	3	
E	10	

Function Rule

Multiply by 8; then add 5

Input Output

F	2	
G	4	
H	7	
I	6	
J	9	

5. Solve the equations.

A $7 \times n = 42$

$n = \underline{\quad}$

B $n \times 8 = 64$

$n = \underline{\quad}$

C $3 \times 9 = n$

$n = \underline{\quad}$

D $n \times 6 = 54$

$n = \underline{\quad}$

E $7 \times n = 63$

$n = \underline{\quad}$

F $n \times 9 = 72$

$n = \underline{\quad}$

G $7 \times 8 = n$

$n = \underline{\quad}$

1. Sally ate in a restaurant which had this menu. She chose **roast beef** and **corn**. Tim chose lamb chops and peas.

A What would you choose?

_____ and _____

B There are 6 different dinners you can choose. List them all.

1. _____ and _____

4. _____ and _____

2. _____ and _____

5. _____ and _____

3. _____ and _____

6. _____ and _____

C How many kinds of meat are there? _____

D How many vegetables? _____

E How many different dinners are there? _____

F Solve the equation: $3 \times 2 =$

2. A Draw lines to match square 1 with circles A, B, and C.

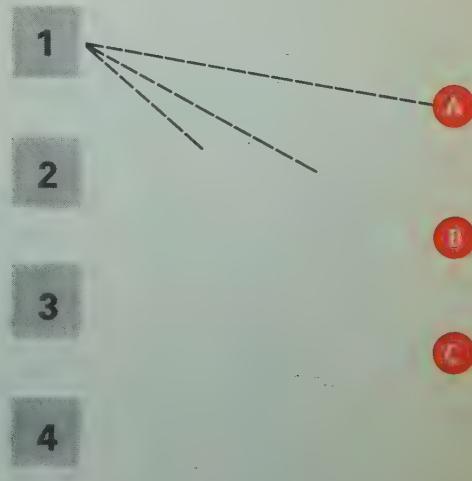
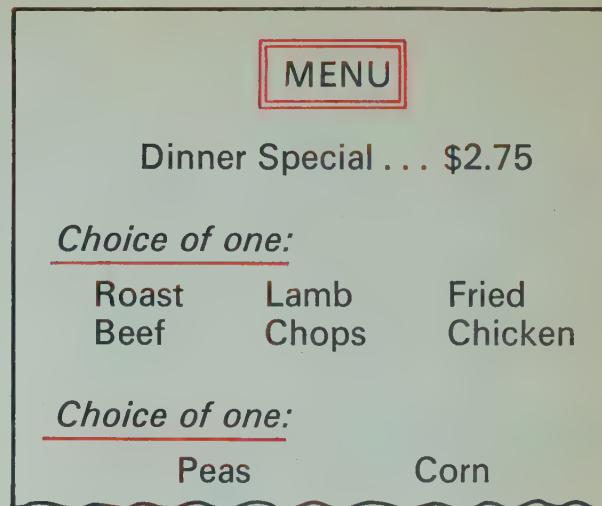
B Draw lines to match each square with circles A, B, and C.

C There are _____ squares.

D There are _____ circles.

E _____ matching lines are drawn from each square.

F There are _____ matching lines in all. We write, $4 \times$ _____ = .



Write a multiplication equation for each problem. Then fill the blank in the sentence.

1. Tom bought six 8-cent stamps. How much did he pay for the stamps?

$$6 \times =$$

Tom spent _____ cents.

2. How many pennies would it take to buy as much as 9 nickels?

$$\times 5 =$$

9 nickels are worth _____ cents.

3. Each team has 9 players. There are 4 teams. How many players are there?

$$=$$

There are _____ players in all.



Fill the blanks in each short story.

1. 7 cartons. 6 bottles in each

carton. _____ bottles.



2. 6 children at each table.

4 tables. _____ children.

3. 9 boxes of cupcakes. 4 cupcakes in each box. _____ cupcakes in all.



4. Nine 4-cent stamps. Total cost is

_____ cents.

4. Nan took swimming lessons 4 days a week for 6 weeks. How many days did Nan take lessons?

$$=$$

Nan took swimming

lessons for _____ days.

5. There were 8 hot-dog buns in each package. Mrs. Cook bought 7 packages. How many buns did she buy?

$$=$$

Mrs. Cook bought _____ buns.

6. There are 6 rows of desks with 5 desks in each row. If one child sits in each desk, how many children are in the class?

$$=$$

There are _____ children in the class.

5. 1 newspaper costs 7 cents. 7 papers cost _____ cents.

6. 8 nails for each horseshoe. 4 horseshoes for the horse.

_____ nails in all.

7. 8 books in each box. 7 boxes were delivered.

_____ books in all.

8. One spider, 8 legs. 5 spiders,

_____ legs.

1. A There are _____ sets of paper clips.

B There are _____ paper clips in each set.

C There are _____ paper clips in all.

D To tell how many in 6 sets of 4, we write the multiplication equation

_____.



2. Solve the equations.

A Since $8 \times 9 = 72$, then $9 \times 8 =$ _____.

B Since $6 \times 8 =$ _____, then $8 \times 6 =$ _____.

C $(2 \times 8) \times 4 = 2 \times (8 \times$ _____)

E $(4 \times 6) + (\text{_____} \times 6) = 7 \times 6$

D $(3 \times 8) + (4 \times 8) =$ _____ $\times 8$

F $(\text{_____} \times 7) + (3 \times 7) = 3 \times 7$

3. Find the products.

A $8 \times 4 =$ _____

E $6 \times 9 =$ _____

I $6 \times 7 =$ _____

B $9 \times 3 =$ _____

F $8 \times 0 =$ _____

J $8 \times 8 =$ _____

C $6 \times 5 =$ _____

G $7 \times 9 =$ _____

K $5 \times 9 =$ _____

D $7 \times 1 =$ _____

H $5 \times 8 =$ _____

L $9 \times 9 =$ _____

CHANGE OF PACE

A grasshopper and a cricket are jumping along a number line. The grasshopper jumps 8 units each time. The cricket jumps 6 units each time.



1. The cricket starts at 0 and makes 8 jumps. He lands at _____.

2. The grasshopper starts at 0 and makes 6 jumps. He lands at _____.

3. The grasshopper makes 5 jumps. The cricket makes 5 jumps. If they started at 0, how far apart are they? _____.

1. Ring as many sets of 5 as you can.

- A There are _____ figures in all.
- B There are _____ sets of 5.
- C There are _____ sets of 5 in a set of 20.
- D There are _____ fives in 20.
- E Solve the equation. $20 \div 5 = \underline{\hspace{2cm}}$



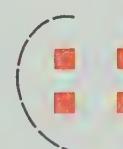
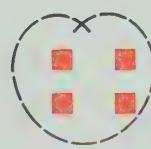
2. Ring as many sets of 3 as you can.

- A There are _____ figures in all.
- B There are _____ sets of 3.
- C There are _____ sets of 3 in a set of 18.
- D Solve the equation. $18 \div 3 = \underline{\hspace{2cm}}$



3. Ring as many sets of 4 as you can.

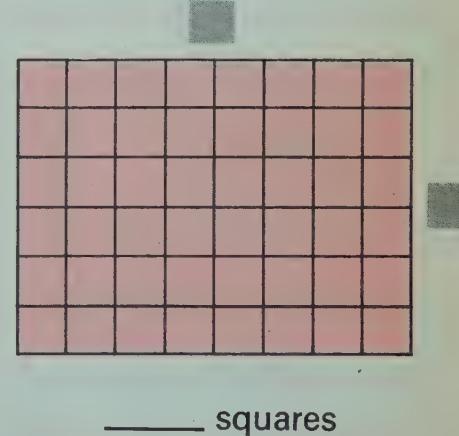
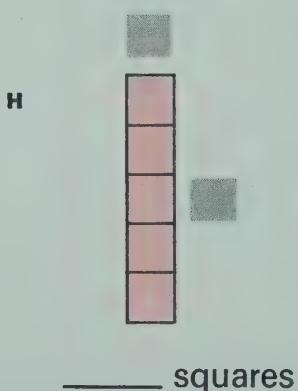
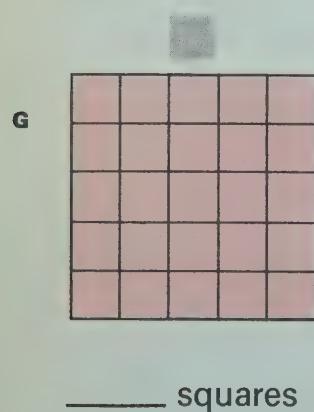
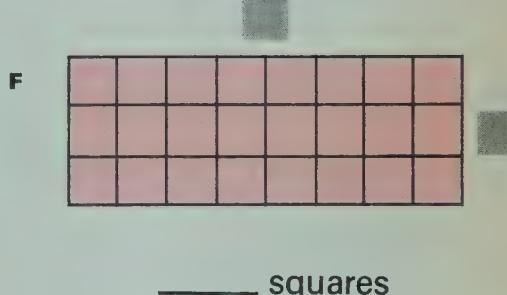
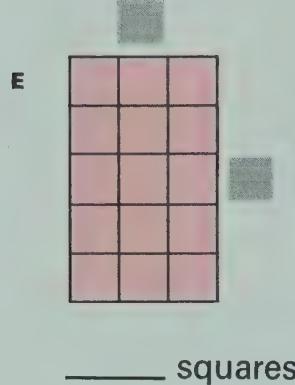
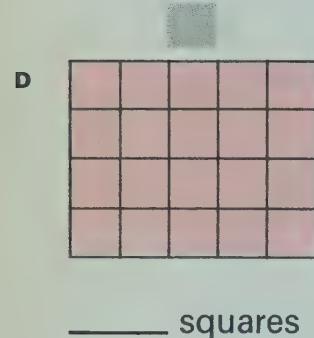
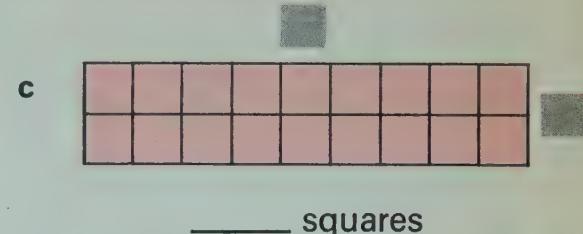
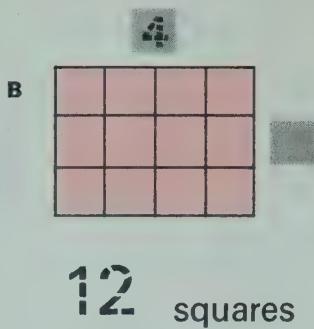
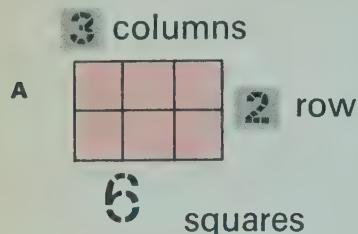
- A There are _____ figures in all.
- B There are _____ sets of 4.
- C There are _____ fours in 20.
- D Solve the equation. $20 \div 4 = \underline{\hspace{2cm}}$



4. Fill in each blank. Then solve the equation.

- A There are _____ twos in 10. $\rightarrow 10 \div 2 = \boxed{\hspace{1cm}}$
- B There are _____ sixes in 18. $\rightarrow 18 \div 6 = \boxed{\hspace{1cm}}$
- C There are _____ fours in 12. $\rightarrow 12 \div 4 = \boxed{\hspace{1cm}}$
- D There are _____ threes in 21. $\rightarrow 21 \div 3 = \boxed{\hspace{1cm}}$

1. Give the number of rows, columns, and squares for each rectangular region.



2. Solve the division equations. Your work in exercise 1 will help you.

A $12 \div 3 =$

E $20 \div 5 =$

I $6 \div 3 =$

B $6 \div 2 =$

F $5 \div 1 =$

J $48 \div 8 =$

C $15 \div 3 =$

G $24 \div 3 =$

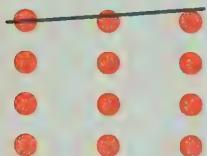
K $5 \div 5 =$

D $25 \div 5 =$

H $18 \div 2 =$

L $24 \div 8 =$

1. Complete each subtraction equation. Then fill in the blanks and complete the division equation.



$$12 - 3 = \boxed{\quad}$$



$$9 - 3 = \boxed{\quad}$$



$$6 - 3 = \boxed{\quad}$$



$$3 - 3 = \boxed{\quad}$$

Three was subtracted _____ times.

There are _____ threes in 12. $\rightarrow 12 \div 3 = \boxed{\quad}$

2. Complete each subtraction equation. Then fill in the blanks and complete the division equation.



$$15 - 5 = \boxed{\quad}$$



$$10 - 5 = \boxed{\quad}$$



$$5 - 5 = \boxed{\quad}$$

Five was subtracted _____ times.

There are _____ fives in 15. $\rightarrow 15 \div 5 = \boxed{\quad}$

3. Find the differences. Then fill in the blanks.

$$\begin{array}{r} 12 \\ - 2 \\ \hline 10 \end{array} \quad \begin{array}{r} 10 \\ - 2 \\ \hline 8 \end{array} \quad \begin{array}{r} 8 \\ - 2 \\ \hline 6 \end{array} \quad \begin{array}{r} 6 \\ - 2 \\ \hline 4 \end{array} \quad \begin{array}{r} 4 \\ - 2 \\ \hline 2 \end{array}$$

Two was subtracted _____ times.

There are _____ twos in 12. $\rightarrow 12 \div 2 = \boxed{\quad}$

4. Find the differences. Then fill in the blanks.

$$\begin{array}{r} 42 \\ - 6 \\ \hline 36 \end{array} \quad \begin{array}{r} 36 \\ - 6 \\ \hline 30 \end{array} \quad \begin{array}{r} 30 \\ - 6 \\ \hline 24 \end{array} \quad \begin{array}{r} 24 \\ - 6 \\ \hline 18 \end{array} \quad \begin{array}{r} 18 \\ - 6 \\ \hline 12 \end{array} \quad \begin{array}{r} 12 \\ - 6 \\ \hline 6 \end{array}$$

Six was subtracted _____ times.

There are _____ sixes in 42. $\rightarrow 42 \div 6 = \boxed{\quad}$



A It takes _____ jumps of 9 to get from 36 to zero.

B There are _____ nines in 36. $\rightarrow 36 \div 9 =$



A It takes _____ jumps of 6 to get from 42 to zero.

B There are _____ sixes in 42. $\rightarrow 42 \div 6 =$



A It takes _____ jumps of 8 to get from 48 to zero.

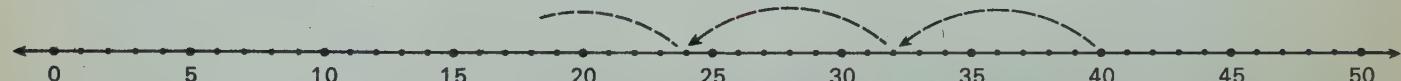
B There are _____ eights in 48. $\rightarrow 48 \div 8 =$

4. Complete the jumps of 5 from 35 to zero.



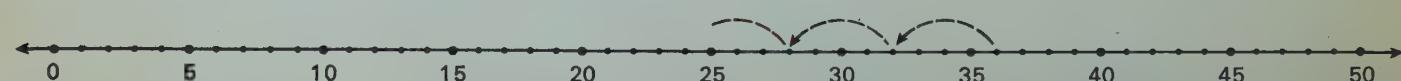
There are _____ fives in 35. $\rightarrow 35 \div 5 =$

5. Complete the jumps of 8 from 40 to zero.



There are _____ eights in 40. $\rightarrow 40 \div 8 =$

6. Complete the jumps of 4 from 36 to zero.



There are _____ fours in 36. $\rightarrow 36 \div 4 =$

1. Find the quotients.

A To find this quotient, think
 $? \times 5 = 20$.

$$20 \div 5 = \boxed{}$$

B To find this quotient, think
 $? \times 4 = 24$.

$$24 \div 4 = \boxed{}$$

C To find this quotient, think
 $? \times 3 = 15$.

$$15 \div 3 = \boxed{}$$

2. Find the missing factor. Then find the quotient.

A To find $12 \div 3$, it helps to think $\boxed{} \times 3 = 12$. $12 \div 3 = \boxed{}$

B To find $15 \div 5$, it helps to think $\boxed{} \times 5 = 15$. $15 \div 5 = \boxed{}$

C To find $10 \div 2$, it helps to think $\boxed{} \times 2 = 10$. $10 \div 2 = \boxed{}$

D To find $18 \div 3$, it helps to think $\boxed{} \times 3 = 18$. $18 \div 3 = \boxed{}$

3. Find the quotients.

A Since $5 \times 7 = 35$, we know that $35 \div 7 = \boxed{}$ and $35 \div 5 = \boxed{}$

B Since $6 \times 8 = 48$, we know that $48 \div 6 = \boxed{}$ and $48 \div 8 = \boxed{}$

C Since $7 \times 6 = 42$, we know that $42 \div 7 = \boxed{}$ and $42 \div 6 = \boxed{}$

D Since $9 \times 8 = 72$, we know that $72 \div 8 = \boxed{}$ and $72 \div 9 = \boxed{}$

4. Solve the equations.

A $\boxed{} \times 3 = 6$

$$6 \div 3 = \boxed{}$$

B $\boxed{} \times 2 = 8$

$$8 \div 2 = \boxed{}$$

C $\boxed{} \times 5 = 10$

$$10 \div 5 = \boxed{}$$

D $\boxed{} \times 4 = 12$

$$12 \div 4 = \boxed{}$$

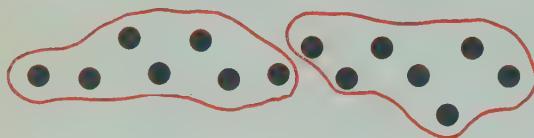
E $\boxed{} \times 3 = 15$

$$15 \div 3 = \boxed{}$$

F $\boxed{} \times 6 = 18$

$$18 \div 6 = \boxed{}$$

1. The picture below suggests a way to think about division.
Fill in the blanks and then solve the equations.



A There are _____ dots in all.
B There are _____ sets of 7.
C There are _____ sevens in 14.

D $2 \times 7 =$ _____

E $7 \times 2 =$ _____

F $14 \div 7 =$ _____

G $14 \div 2 =$ _____

2. Write two multiplication facts and two division facts for each picture.

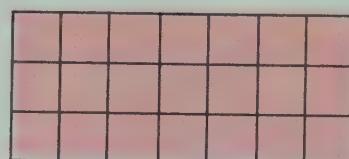


$\frac{2}{\text{ }} \times \frac{5}{\text{ }} =$ _____

$\frac{5}{\text{ }} \times \frac{2}{\text{ }} =$ _____

$\frac{10}{\text{ }} \div \frac{2}{\text{ }} =$ _____

$\frac{10}{\text{ }} \div \frac{5}{\text{ }} =$ _____

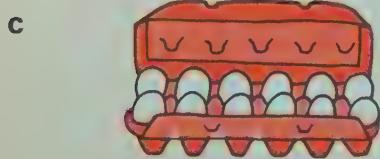


_____ \times _____ = _____

_____ \times _____ = _____

_____ \div _____ = _____

_____ \div _____ = _____



_____ \times _____ = _____

_____ \times _____ = _____

_____ \div _____ = _____

_____ \div _____ = _____



_____ \times _____ = _____

_____ \times _____ = _____

_____ \div _____ = _____

_____ \div _____ = _____

3. Solve the equations.

A $4 \times \boxed{\text{ }} = 36$

B $\boxed{\text{ }} \times 5 = 40$

C $8 \times \boxed{\text{ }} = 48$

D $3 \times \boxed{\text{ }} = 27$

4. Solve the equations.

A $40 \div 5 = \boxed{\text{ }}$

B $48 \div 6 = \boxed{\text{ }}$

C $27 \div 9 = \boxed{\text{ }}$

D $36 \div \boxed{\text{ }} = 4$

1. Solve the multiplication equation. Then solve the division equation.

A $4 \times 6 =$ $\rightarrow 24 \div 6 =$
 B $5 \times 3 =$ $\rightarrow 15 \div 3 =$
 C $6 \times 3 =$ $\rightarrow 18 \div 6 =$
 D $2 \times 8 =$ $\rightarrow 16 \div 8 =$
 E $3 \times 9 =$ $\rightarrow 27 \div 3 =$
 F $4 \times 5 =$ $\rightarrow 20 \div 4 =$
 G $6 \times 5 =$ $\rightarrow 30 \div 5 =$
 H $5 \times 5 =$ $\rightarrow 25 \div 5 =$
 I $7 \times 3 =$ $\rightarrow 21 \div 7 =$

J $\times 6 = 30 \rightarrow 30 \div 6 =$
 K $\times 7 = 21 \rightarrow 21 \div 7 =$
 L $\times 6 = 36 \rightarrow 36 \div 6 =$
 M $\times 7 = 35 \rightarrow 35 \div 7 =$
 N $\times 8 = 32 \rightarrow 32 \div 8 =$
 O $\times 4 = 28 \rightarrow 28 \div 4 =$
 P $\times 3 = 24 \rightarrow 24 \div 3 =$
 Q $\times 4 = 16 \rightarrow 16 \div 4 =$
 R $\times 9 = 18 \rightarrow 18 \div 9 =$

2. Find the products.

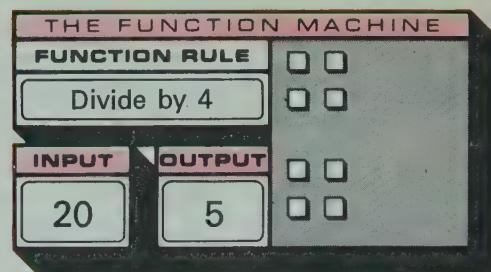
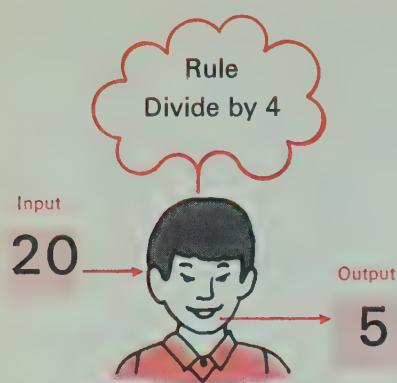
A $6 \times 2 =$ E $8 \times 3 =$
 B $5 \times 7 =$ F $9 \times 2 =$
 C $4 \times 8 =$ G $7 \times 4 =$
 D $3 \times 9 =$ H $6 \times 7 =$

I $7 \times 7 =$ M $7 \times 8 =$
 J $8 \times 2 =$ N $9 \times 7 =$
 K $3 \times 3 =$ O $5 \times 5 =$
 L $8 \times 9 =$ P $8 \times 8 =$

3. Find the quotients. (Hint: See exercise 2.)

A $24 \div 4 =$ E $24 \div 3 =$
 B $27 \div 9 =$ F $18 \div 2 =$
 C $32 \div 8 =$ G $28 \div 4 =$
 D $35 \div 7 =$ H $42 \div 6 =$

I $54 \div 6 =$ M $48 \div 8 =$
 J $72 \div 9 =$ N $64 \div 8 =$
 K $9 \div 3 =$ O $25 \div 5 =$
 L $16 \div 2 =$ P $63 \div 9 =$



Think about the function machine and give the missing numbers.

1. **Function Rule**

Divide by 4

	Input	Output
	20	5
A	16	4
B	12	
C	4	
D	8	
	24	

2. **Function Rule**

Divide by 3

	Input	Output
	15	5
A	9	3
B	6	
C	12	
D	3	
	18	

3. **Function Rule**

Divide by 2

	Input	Output
A	10	5
B	12	
C	8	
D	14	
E	18	
	0	

4. **Function Rule**

Divide by 1

	Input	Output
A	7	7
B	6	
C	17	
D	12	
E	13	
	1	

5. **Function Rule**

Add 9

	Input	Output
A	8	
B	7	
C	6	
D	10	
E	0	
F	1	

6. **Function Rule**

Subtract 7

	Input	Output
A	14	
B	10	
C	11	
D	7	
E	17	
F	27	

7. **Function Rule**

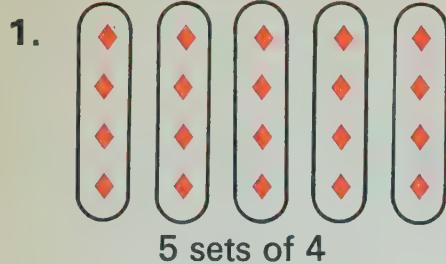
Multiply by 6

	Input	Output
A	6	
B	5	
C	2	
D	4	
E	0	
F	1	

8. **Function Rule**

Divide by 5

	Input	Output
A	15	
B	5	
C	10	
D	0	
E	25	
F	35	



$$5 \times 4 = \square$$

$20 \div 4 = \square$

$20 \div 5 = \square$



$$4 \times 6 = \square$$

$24 \div 6 = \square$

$24 \div 4 = \square$

3. 18 marbles.
3 in each bag.



$$18 \div 3 = \square$$

There are _____ bags of marbles.

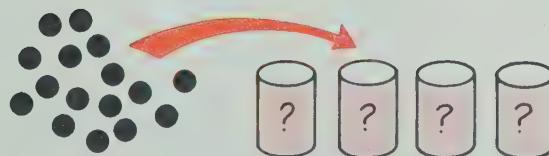
4. 30 marbles.
Same number in each bag.



$$30 \div 5 = \square$$

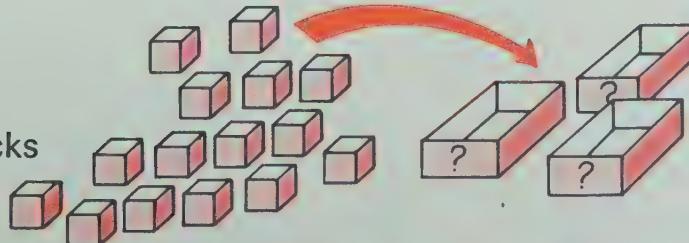
There are _____ marbles in each bag.

5. Put the same number of marbles in each can.



There are _____ marbles in each can.

6. Put the same number of blocks in each box.



There are _____ blocks in each box.

7. Put 3 balls in each sack.



_____ sacks are needed to hold all the balls.

Write a division equation for each problem.
Then fill the blank in the sentence.

1. Jim had 32 baseball cards. He put them in stacks of 8. How many stacks of 8 did he have?

$$\underline{32 \div 8 =}$$

There were _____ stacks of 8 cards.



2. Jane spent 24 cents for candy bars. Each bar cost 4 cents. How many did she buy?

$$\underline{24 \div 4 =}$$

Jane bought _____ candy bars.

3. Summer camp lasts 21 days. This is how many weeks?

$$\underline{21 \div =}$$

Summer camp lasts _____ weeks.



4. Ann has 30 cents worth of nickels. How many nickels does she have?

$$\underline{30 \div =}$$

Ann has _____ nickels.

5. There are 45 boys. 9 boys are put on each team. How many teams are there?

$$\underline{45 \div =}$$

There are _____ teams.

6. There are 35 seats in Sue's class. There are 5 seats in each row. How many rows are there?

$$\underline{\hspace{2cm}}$$

There are _____ rows of seats.

7. There are 30 children going to a picnic. If 6 children ride in each car, how many cars will be needed?

$$\underline{\hspace{2cm}}$$

It will take _____ cars for the picnic.

8. A large can holds 36 glasses of milk. There are 4 glasses in a litre. How many litres does the can hold?

$$\underline{\hspace{2cm}}$$

The can holds _____ litres of milk.

9. Mr. Field works 7 hours a day. How many days does it take for him to work 35 hours?

$$\underline{\hspace{2cm}}$$

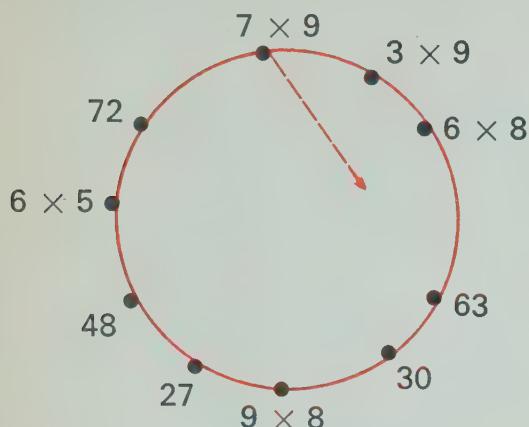
It takes _____ days for Mr. Field to work 35 hours.

10. There are 7 days in a week. How many weeks in 42 days?

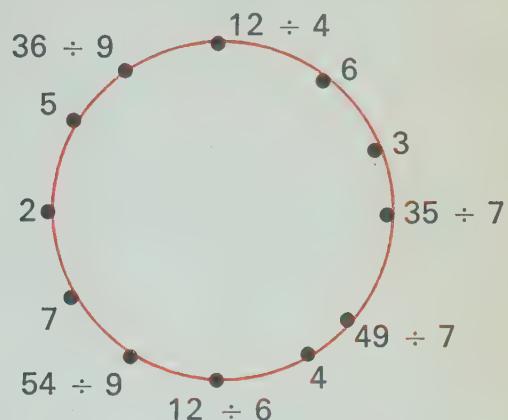
$$\underline{\hspace{2cm}}$$

_____ weeks.

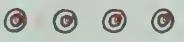
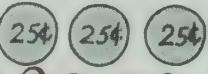
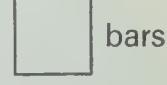
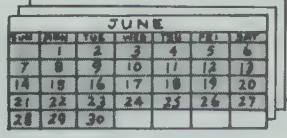
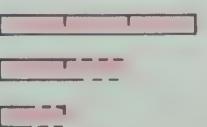
1. Draw lines to connect the product to its factors.



2. Draw lines to connect the division problem to its quotient.

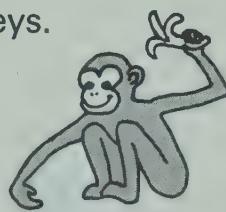


3. Give the missing number in each part.

<p>A</p> <p>IF  1 car</p> <p> 4 wheels</p>	<p>THEN  5 cars</p> <p> wheels</p>
<p>B</p> <p>IF  3 quarters</p> <p> 6 bars</p>	<p>THEN  1 quarter</p> <p> bars</p>
<p>C</p> <p>IF  35 jumps</p> <p> 1 minute</p>	<p>THEN  <input type="text"/> jumps</p> <p> 2 minutes</p>
<p>D</p> <p>IF  1 month</p> <p>30 days</p>	<p>THEN  4 months</p> <p><input type="text"/> days</p>
<p>E</p> <p>IF  1 decimetre</p> <p>10 decimetres</p>	<p>THEN  3 metres</p> <p><input type="text"/> decimetres</p>

1. 27 cents. Oranges, 9 cents each.
How many oranges can we buy? _____

2. 30 seats. Same number in
each row. 6 rows. How
many seats in each row? _____

3. 48 bananas. 6 monkeys.
How many bananas
per monkey? _____ 

4. 24 children.
16 girls.
How many boys? _____

5. 12 girls. 19 boys.
6 adults.
How many people? _____

6. 4 dogs. 32 fleas.
Same number on each dog.
How many fleas on each dog? _____ 

7. 21 dollars. 3 dollars for a hat.
How many hats? _____

8. 18 marbles.
Same number to each of 3 boys.
How many for each boy? _____

9. 32 players for 4 teams. How
many players for each team? _____

10. 62 apples.
37 of them bad.
How many good apples? _____ 

11. 3 pieces per box.
9 boxes.
How many pieces? _____

12. 7 days per week.
6 weeks.
How many days? _____

13. 6 men. 9 women.
38 children.
How many people? _____

14. 50 cents.
Circus ticket, 35 cents.
How much change? _____ 

15. 2 days off each week.
6 weeks.
How many days off? _____

16. 35 school days. 5 school days
per week. How many weeks? _____

17. 36 pieces of cheese.
9 mice. How many
pieces of cheese
for each mouse? _____

1. Find the quotients.

A Since $20 \div 4 = 5$,
we know $24 \div 4 = \boxed{}$.

B Since $10 \div 2 = 5$,
we know $12 \div 2 = \boxed{}$.

C Since $30 \div 6 = 5$,
we know $30 \div 5 = \boxed{}$.

D Since $30 \div 6 = 5$,
we know $36 \div 6 = \boxed{}$.

E Since $40 \div 8 = 5$,
we know $48 \div 8 = \boxed{}$.

F Since $18 \div 3 = 6$,
we know $21 \div 3 = \boxed{}$.

G Since $45 \div 9 = 5$,
we know $54 \div 9 = \boxed{}$.

H Since $48 \div 8 = 6$,
we know $48 \div 6 = \boxed{}$.

I Since $48 \div 8 = 6$,
we know $56 \div 8 = \boxed{}$.

J Since $30 \div 5 = 6$,
we know $35 \div 5 = \boxed{}$.

2. Find the products and quotients.

A $4 \times 5 = \boxed{}$ $\longrightarrow 20 \div 5 = \boxed{}$ $\longrightarrow 25 \div 5 = \boxed{}$

B $6 \times 3 = \boxed{}$ $\longrightarrow 18 \div 3 = \boxed{}$ $\longrightarrow 18 \div 6 = \boxed{}$

C $4 \times 3 = \boxed{}$ $\longrightarrow 12 \div 3 = \boxed{}$ $\longrightarrow 15 \div 3 = \boxed{}$

D $8 \times 2 = \boxed{}$ $\longrightarrow 16 \div 2 = \boxed{}$ $\longrightarrow 18 \div 2 = \boxed{}$

E $6 \times 4 = \boxed{}$ $\longrightarrow 24 \div 4 = \boxed{}$ $\longrightarrow 20 \div 4 = \boxed{}$

F $7 \times 3 = \boxed{}$ $\longrightarrow 21 \div 3 = \boxed{}$ $\longrightarrow 24 \div 3 = \boxed{}$

G $2 \times 9 = \boxed{}$ $\longrightarrow 18 \div 9 = \boxed{}$ $\longrightarrow 36 \div 9 = \boxed{}$

3. Find the quotients.

A $8 \div 4 = \boxed{}$ and $12 \div 4 = \boxed{}$ $\longrightarrow 20 \div 4 = \boxed{}$

B $10 \div 2 = \boxed{}$ and $8 \div 2 = \boxed{}$ $\longrightarrow 18 \div 2 = \boxed{}$

C $20 \div 4 = \boxed{}$ and $4 \div 4 = \boxed{}$ $\longrightarrow 24 \div 4 = \boxed{}$

D $30 \div 6 = \boxed{}$ and $12 \div 6 = \boxed{}$ $\longrightarrow 42 \div 6 = \boxed{}$

1. Ring as many sets of 7 as you can.

A There are _____ sets of 7.

B Solve: $28 \div 7 =$



2. Find the differences. Then solve the equation.

$$\begin{array}{r} 14 \\ - 2 \\ \hline 12 \end{array}$$

$$\begin{array}{r} 12 \\ - 2 \\ \hline 10 \end{array}$$

$$\begin{array}{r} 10 \\ - 2 \\ \hline 8 \end{array}$$

$$\begin{array}{r} 8 \\ - 2 \\ \hline 6 \end{array}$$

$$\begin{array}{r} 6 \\ - 2 \\ \hline 4 \end{array}$$

$$\begin{array}{r} 4 \\ - 2 \\ \hline 2 \end{array}$$

$$14 \div 2 =$$

3. It takes _____ jumps of 6 to get from 24 to zero.

A It takes _____ jumps of 6 to get from 24 to zero.

B Solve: $24 \div 6 =$

4. Since $8 \times 9 = 72$, we know that $72 \div 9 =$ and $72 \div 8 =$

5. Complete the division equation

for this problem:

20 cents in all.

4 cents for each candy cane.

How many candy canes can we buy?

6. Jim divided 36 baseball

cards equally among four friends. How many did

each friend get? _____

$$\underline{20 \div =}$$

7. Solve: A $32 \div 4 =$

B $24 \div 6 =$

C $35 \div 5 =$

CHANGE OF PACE

Give the correct sign (+, -, \times , \div) for each ●

Examples: $3 \bullet 5 = 8$ $18 \bullet 3 = 6$

1. $6 \bullet 3 = 9$

4. $5 \bullet 9 = 14$

7. $12 \bullet 3 = 15$

10. $10 \bullet 5 = 5$

2. $7 \bullet 3 = 21$

5. $7 \bullet 7 = 0$

8. $12 \bullet 3 = 4$

11. $10 \bullet 5 = 50$

3. $12 \bullet 2 = 10$

6. $20 \bullet 4 = 5$

9. $12 \bullet 3 = 9$

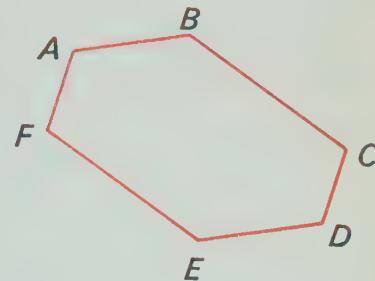
12. $10 \bullet 5 = 2$

1. Fill in each blank with the name of one of the segments shown in the figure.

A \overline{AB} is parallel to _____.

B \overline{AF} is parallel to _____.

C \overline{FE} is parallel to _____.



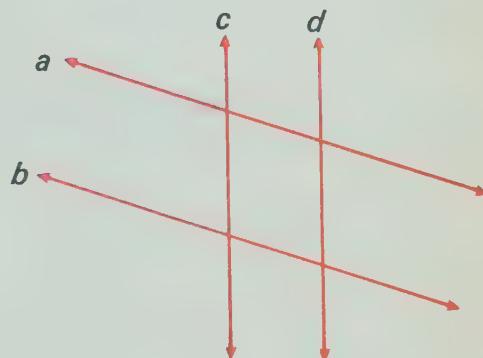
2. Fill in each blank with the name of one of the lines shown at the right.

A Line a is parallel to line _____.

B Line c is parallel to line _____.

C Line b is parallel to line _____.

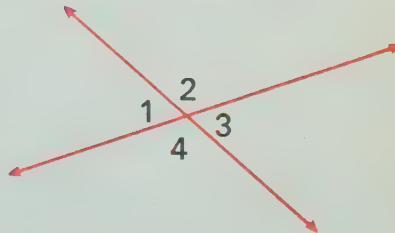
D Line d is parallel to line _____.



3. Refer to the pair of lines at the right to help you fill in each blank below.

A Angle 2 is the same size as angle _____.

B Angle 3 is the same size as angle _____.



4. Refer to the figure at the right to help you fill in each blank below.

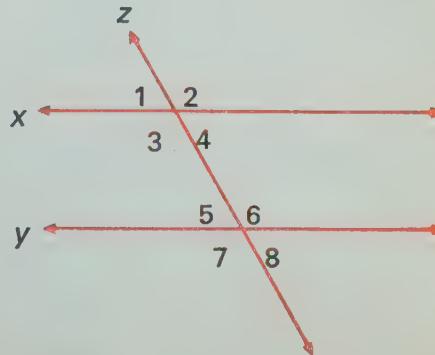
A Line x is parallel to line _____.

B Angle 2 is the same size as angle 6.
Angle 2 is also the same size as

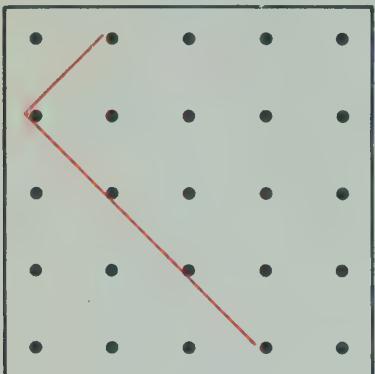
angle _____ and angle _____.

C Angle 1 is the same size as angle _____,

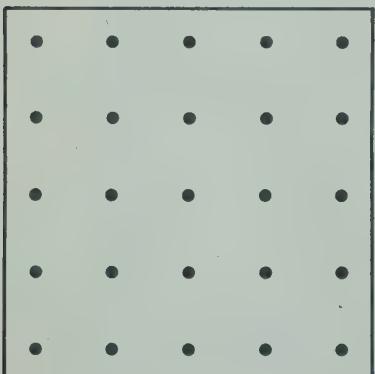
angle _____, and angle _____.



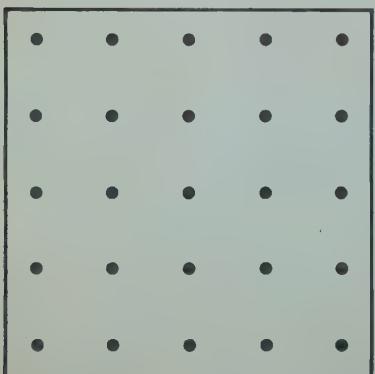
1. A **rectangle** has two pair of parallel sides and four right angles. Complete the drawing to make a rectangle.



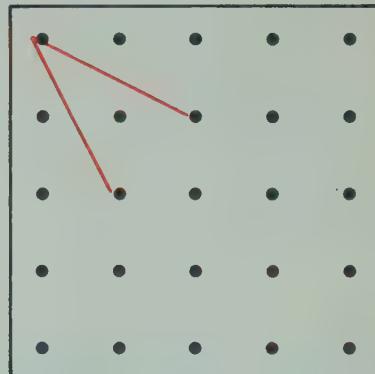
3. Draw a quadrilateral so that each side is a different length.



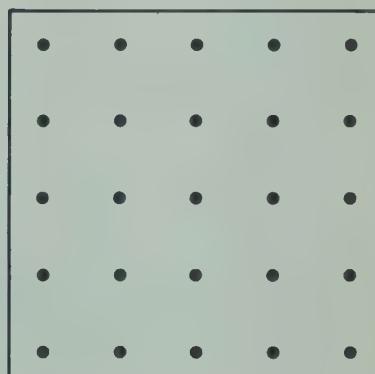
5. A **square** has four right angles and all four sides of the same length. Draw a square.



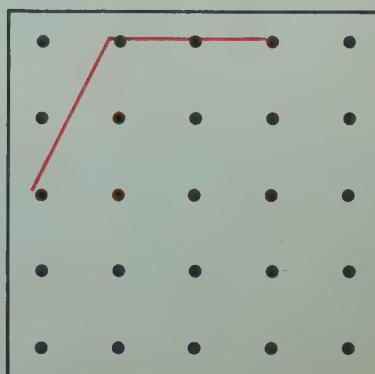
2. A **rhombus** has two pair of parallel sides and all four sides of the same length. Complete the drawing to form a rhombus.



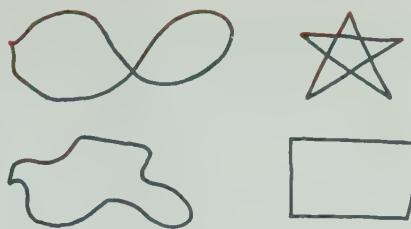
4. A **parallelogram** has two pair of parallel sides. Draw a parallelogram.



6. A **trapezoid** has one pair of parallel sides. Complete the drawing to form a trapezoid.

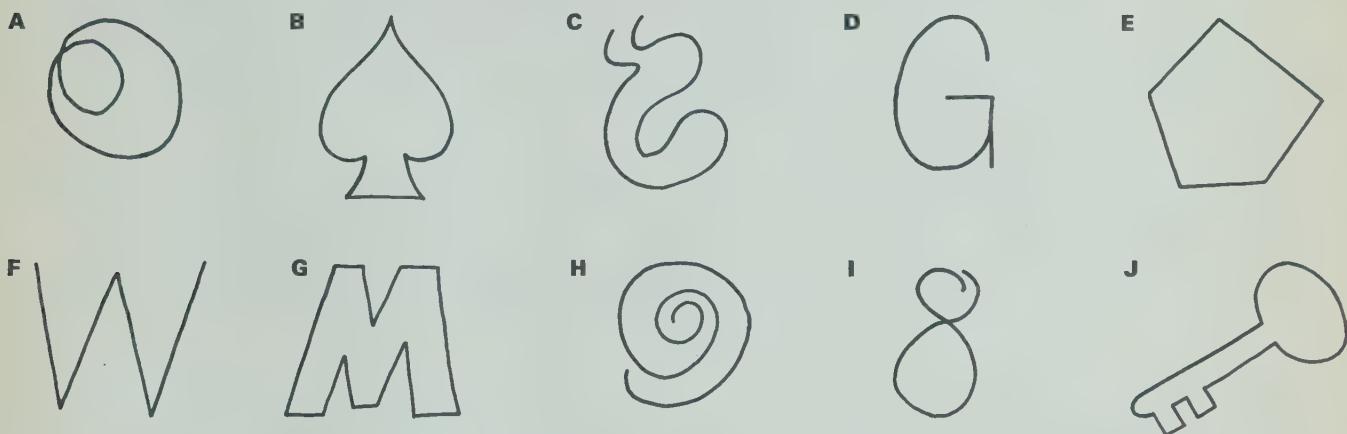


A closed curve is a figure that begins and ends at the same point.



A simple closed curve is a closed curve that does not cross itself.

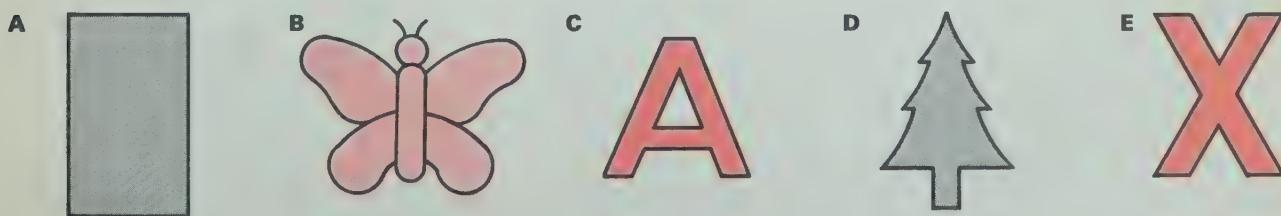
1. Place a ✓ inside the figures that are **simple closed curves**.



A figure is **symmetric** if you can fold it so that one half exactly matches the other half.



2. For each figure below, think about how you would fold it to make one half of it match the other half. Then use your ruler to draw a dotted line through each figure to show that they are symmetric. (Hint: Some figures may have more than one line of symmetry.)

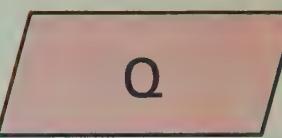


3. Complete the drawing to show how each figure would look when unfolded.



1. In the blanks below, write the letter of the figure that matches each name.

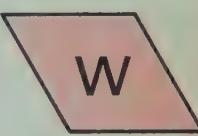
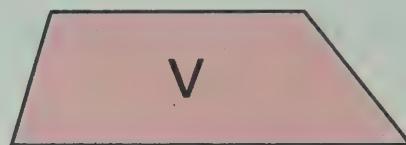
A Rectangle _____



B Parallelogram _____



C Square _____

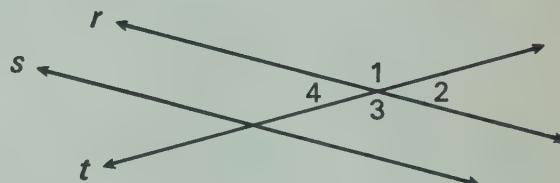


D Trapezoid _____

E Rhombus _____

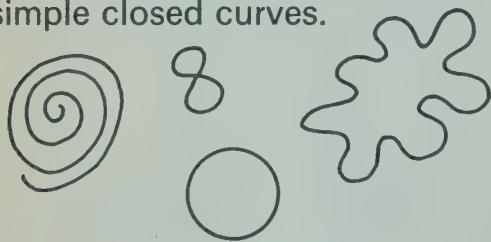
2. In the figure at the right,

line s is parallel to line _____



and angle 3 is the same size as angle _____.

3. Ring the figures that are simple closed curves.

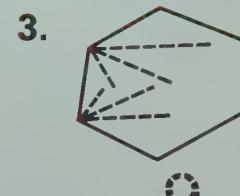
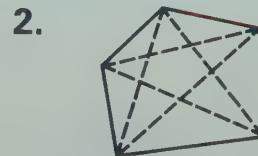
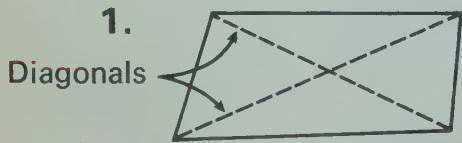


4. Draw a dotted line through each figure to show that they are symmetric.

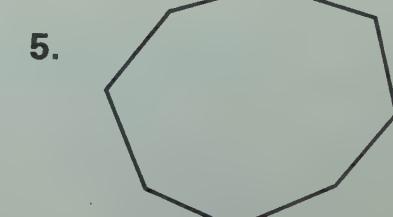


CHANGE of PACE

Draw all possible diagonals for each figure.



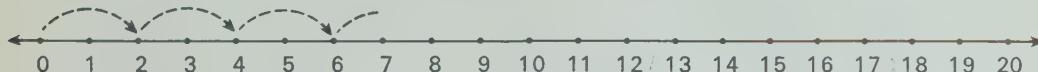
How many → 2
did you
draw?



How many
did you
draw?
→ _____



1. Complete the jumps of 2 from zero to 18.



A After 4 jumps,
you landed at _____.
B After 5 jumps,
you landed at _____.
C After 7 jumps,
you landed at _____.
D After 9 jumps,
you landed at _____.
E After 10 jumps,
you would land at _____.
F After 15 jumps,
you would land at _____.

The landing points represent the **even** numbers.

The other numbers are called **odd** numbers.

2. Each **even** number ends with 0, 2, ____, ____, or _____.

Each **odd** number ends with ____, ____, ____, ____, or _____.

3. Answer "even" or "odd" for each number.

A 14 _____	C 33 _____	E 726 _____	G 1001 _____
B 15 _____	D 40 _____	F 397 _____	H 5096 _____

4. Fill in the addition and multiplication tables.

A	+	2	4	6
8				
0				
10				

B	+	12	4	10
9				
31				
53				

C	×	3	7	5
1				
3				
9				

5. Answer "even" or "odd."

A The sum of two even numbers is an _____ number.
B The sum of an even number and an odd number is an _____ number.
C The product of two odd numbers is an _____ number.

1. Give the missing numbers.

- A The first ten multiples of 2 are 0, 2, 4, 6, 8, 10, _____, _____, _____, _____.
- B The first ten multiples of 3 are 0, 3, 6, 9, 12, 15, _____, _____, _____, _____.
- C The first eight multiples of 4 are 0, 4, 8, 12, _____, _____, _____, _____.
- D The first eight multiples of 5 are 0, 5, 10, 15, _____, _____, _____, _____.

2. Give the correct number for each blank.

- A Since $3 \times 7 = 21$, we know that both _____ and _____ are factors of 21.
- B Since $5 \times 6 = 30$, we know that both _____ and _____ are factors of 30.
- C Since $4 \times 7 = 28$, we know that both _____ and _____ are factors of 28.
- D Since $6 \times 4 = 24$, we know that both _____ and _____ are factors of 24.

3. Write a different multiplication equation on each line.

A 1 12 = 12

B _____ \times _____ = 20

C _____ \times _____ = 15

2 \times _____ = 12

_____ \times _____ = 20

_____ \times _____ = 15

3 \times _____ = 12

_____ \times _____ = 20

The factors of 15 are _____.

The factors of 12 are

1, 2, 3, 4, 6, 12

The factors of 20 are

_____.

D _____ \times _____ = 18

E _____ \times _____ = 10

F _____ \times _____ = 16

_____ \times _____ = 18

_____ \times _____ = 10

_____ \times _____ = 16

_____ \times _____ = 18

The factors of 10 are

_____ \times _____ = 16

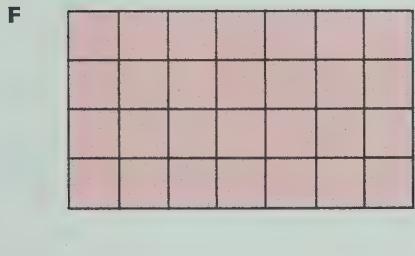
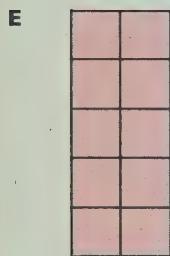
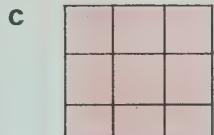
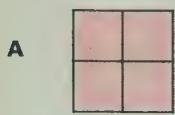
The factors of 18 are

_____.

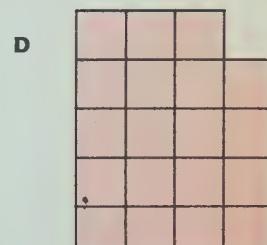
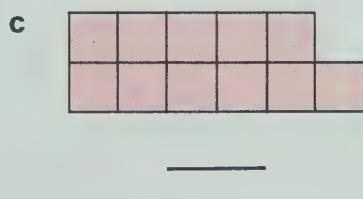
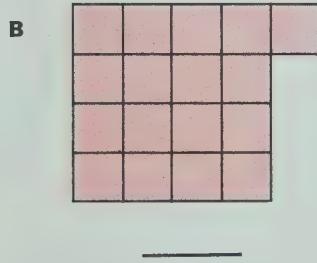
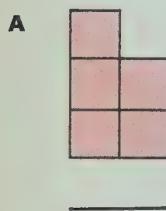
The factors of 16 are

_____.

1. Give the number of squares in each rectangular shape.



2. Numbers that are greater than 1 and do not form rectangular shapes are called **prime numbers**. Give the number of squares for each shape.



3. When you can, write a second multiplication equation using different factors.

A $5 \times 1 = 5$ _____ \times _____ $= 5$

2

B $6 \times 1 = 6$ _____ \times _____ $= 6$

Some numbers (4, 6, 8, 9, etc.) have more than two factors.

C $7 \times 1 = 7$ _____ \times _____ $= 7$

Some numbers have exactly two different factors. These numbers are called **prime numbers**.

D $8 \times 1 = 8$ _____ \times _____ $= 8$

3

E $9 \times 1 = 9$ _____ \times _____ $= 9$

F $13 \times 1 = 13$ _____ \times _____ $= 13$

4. List the prime numbers less than 20. _____

1. Answer "even" or "odd" for each blank.

- A The number 78 is an _____ number.
- B The number 87 is an _____ number.
- C If a number ends in 0, 2, 4, 6, or 8, it is an _____ number.
- D If a number ends in 1, 3, 5, 7, or 9, it is an _____ number.

2. A Since $5 \times 7 = 35$, we know that _____ and _____ are factors of 35.
 _____ is a multiple of 5 and 7.

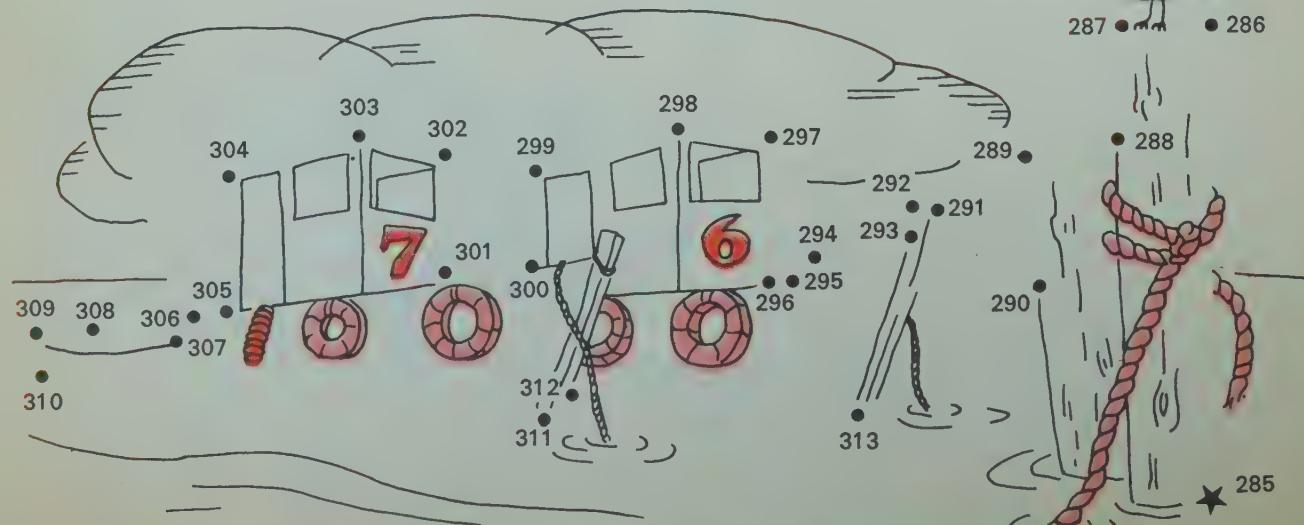
B Since $6 \times 4 = 24$, we know that _____ and _____ are factors of 24.
 _____ is a multiple of 6 and 4.

3. Answer "true" or "false" for each exercise.

- A The number 5 is a prime number. _____
- B The number 9 is a prime number. _____
- C Each odd number is a prime number. _____
- D The prime numbers have exactly 2 factors. _____

CHANGE OF PACE

Connect the dots in order. Begin at the ★.



1. Complete the table.

	Sets of 10 or 100	Number of sets	Number in all	Equation
A		6	60	$6 \times 10 = 60$
B				
C				
D				
E				

2. A For 7 tens, we write _____. $\rightarrow 7 \times 10 = \underline{\hspace{2cm}}$
 B For 3 hundreds, we write _____. $\rightarrow 3 \times 100 = \underline{\hspace{2cm}}$

3. To multiply 35×10 $\rightarrow (30 \times 10) + (5 \times 10)$

30 tens and 5 tens

$$\underline{\hspace{2cm}} + \underline{\hspace{2cm}} = \underline{\hspace{2cm}}$$

4. Find the two products and their sum. Then solve the equation.

A $(70 \times 10) + (3 \times 10)$
 $\downarrow \qquad \downarrow$
 $\underline{\hspace{2cm}} + \underline{\hspace{2cm}} = \underline{\hspace{2cm}}$

$$73 \times 10 = \underline{\hspace{2cm}}$$

c $(30 \times 10) + (7 \times 10)$
 $\downarrow \qquad \downarrow$
 $\underline{\hspace{2cm}} + \underline{\hspace{2cm}} = \underline{\hspace{2cm}}$

$$37 \times 10 = \underline{\hspace{2cm}}$$

B $(90 \times 10) + (5 \times 10)$
 $\downarrow \qquad \downarrow$
 $\underline{\hspace{2cm}} + \underline{\hspace{2cm}} = \underline{\hspace{2cm}}$

$$95 \times 10 = \underline{\hspace{2cm}}$$

d $(50 \times 100) + (3 \times 100)$
 $\downarrow \qquad \downarrow$
 $\underline{\hspace{2cm}} + \underline{\hspace{2cm}} = \underline{\hspace{2cm}}$

$$53 \times 100 = \underline{\hspace{2cm}}$$

1. Give the missing numbers.

A 4×70

B 9×30

C 5×60

D $4 \times 7 \times 10$

E $9 \times 3 \times 10$

F $5 \times 6 \times 10$

28 $\times 10$

 $\times 10$

 $\times 10$

2. Solve the equations.

A $4 \times 80 = \underline{32} \times 10 = \underline{320}$

D $7 \times 20 = \underline{\quad} \times 10 = \underline{\quad}$

B $9 \times 20 = \underline{\quad} \times 10 = \underline{\quad}$

E $4 \times 60 = \underline{\quad} \times 10 = \underline{\quad}$

C $6 \times 30 = \underline{\quad} \times 10 = \underline{\quad}$

F $2 \times 90 = \underline{\quad} \times 10 = \underline{\quad}$

3. Find the products.

A $6 \times 3 = \underline{\quad} \rightarrow 6 \times 30 = \underline{\quad} \rightarrow 6 \times 300 = \underline{\quad}$

B $4 \times 7 = \underline{\quad} \rightarrow 4 \times 70 = \underline{\quad} \rightarrow 4 \times 700 = \underline{\quad}$

C $2 \times 9 = \underline{\quad} \rightarrow 2 \times 90 = \underline{\quad} \rightarrow 2 \times 900 = \underline{\quad}$

D $4 \times 5 = \underline{\quad} \rightarrow 4 \times 50 = \underline{\quad} \rightarrow 4 \times 500 = \underline{\quad}$

4. Solve the equations.

A $3 \times 70 = 21 \times 10 = \underline{\quad}$

D $6 \times 200 = 12 \times \underline{\quad} = 1200$

B $6 \times 30 = 18 \times \underline{\quad} = 180$

E $9 \times 300 = \underline{\quad} \times 100 = 2700$

C $4 \times 80 = \underline{\quad} \times 10 = 320$

F $8 \times 400 = \underline{\quad} \times 100 = \underline{\quad}$

5. Find the products.

A $8 \times 10 = \underline{\quad}$

E $10 \times 6 = \underline{\quad}$

I $4 \times 90 = \underline{\quad}$

B $8 \times 100 = \underline{\quad}$

F $3 \times 50 = \underline{\quad}$

J $30 \times 8 = \underline{\quad}$

C $8 \times 20 = \underline{\quad}$

G $7 \times 100 = \underline{\quad}$

K $2 \times 700 = \underline{\quad}$

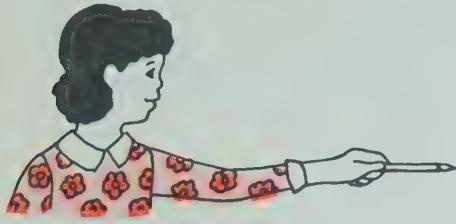
D $8 \times 200 = \underline{\quad}$

H $3 \times 400 = \underline{\quad}$

L $400 \times 3 = \underline{\quad}$

1. You can “break apart” one of the factors when you multiply.

A Complete the equation for Jennifer.



5 × 7
5 fours and 5 threes

$$5 \times 7 = (5 \times 4) + (5 \times \underline{\hspace{2cm}})$$

B Complete the equation for Philip.



3 × 12
3 tens and 3 twos

$$3 \times 12 = (3 \times 10) + 3 \times \underline{\hspace{2cm}}$$

2. Solve the equations.

A Think:
2 tens and 2 fours

$$2 \times 14 = (2 \times 10) + (2 \times \underline{\hspace{2cm}})$$

B Think:
3 twenties and 3 fives

$$3 \times 25 = (3 \times 20) + (3 \times \underline{\hspace{2cm}})$$

C Think:
4 tens and 4 sevens

$$4 \times 17 = (4 \times \underline{\hspace{2cm}}) + (4 \times 7)$$

D Think:
5 thirties and 5 eights

$$5 \times 38 = (5 \times 30) + (5 \times \underline{\hspace{2cm}})$$

E Think:
7 sixties and 7 twos

$$7 \times 62 = (7 \times \underline{\hspace{2cm}}) + (7 \times 2)$$

F Think:
9 tens and 9 sixes

$$9 \times 16 = (9 \times 10) + (9 \times \underline{\hspace{2cm}})$$

1. Solve the equations.

A $3 \times 42 = (3 \times 40) + (3 \times \underline{\hspace{1cm}})$

D $9 \times 36 = (9 \times \underline{\hspace{1cm}}) + (9 \times 6)$

B $4 \times 27 = (4 \times \underline{\hspace{1cm}}) + (4 \times 7)$

E $8 \times 24 = (8 \times 20) + (8 \times \underline{\hspace{1cm}})$

C $6 \times 21 = (6 \times 20) + (6 \times \underline{\hspace{1cm}})$

F $5 \times 78 = (5 \times \underline{\hspace{1cm}}) + (5 \times 8)$

2. Give the products. Then give their sum.

A To find 3×42 ,

we add the products $\begin{cases} 3 \times 40 = \underline{\hspace{1cm}} \\ 3 \times 2 = \underline{\hspace{1cm}} \end{cases}$

$3 \times 42 =$

B To find 6×32 ,

we add the products $\begin{cases} 6 \times 30 = \underline{\hspace{1cm}} \\ 6 \times 2 = \underline{\hspace{1cm}} \end{cases}$

$6 \times 32 =$

C To find 4×65 ,

we add the products $\begin{cases} 4 \times 60 = \underline{\hspace{1cm}} \\ 4 \times 5 = \underline{\hspace{1cm}} \end{cases}$

$4 \times 65 =$

D To find 5×37 ,

we add the products $\begin{cases} 5 \times 30 = \underline{\hspace{1cm}} \\ 5 \times 7 = \underline{\hspace{1cm}} \end{cases}$

$5 \times 37 =$

E To find 2×38 ,

we add the products $\begin{cases} 2 \times 30 = \underline{\hspace{1cm}} \\ 2 \times 8 = \underline{\hspace{1cm}} \end{cases}$

$2 \times 38 =$

F To find 3×64 ,

we add the products $\begin{cases} 3 \times 60 = \underline{\hspace{1cm}} \\ 3 \times 4 = \underline{\hspace{1cm}} \end{cases}$

$3 \times 64 =$

3. A Since $3 \times 50 = 150$ and $3 \times 7 = 21$, we know that $3 \times 57 =$.

B Since $4 \times 30 = 120$ and $4 \times 4 = 16$, we know that $4 \times 34 =$.

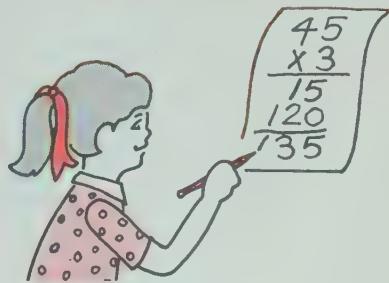
C Since $5 \times 30 = 150$ and $5 \times 5 = 25$, we know that $5 \times 35 =$.

D Since $7 \times 60 = 420$ and $7 \times 7 = 49$, we know that $7 \times 67 =$.

$3 \times 5 = \underline{\quad}$

$3 \times 40 = \underline{\quad}$

$15 + 120 = \underline{\quad}$



Solve the equation. Then give the number for the 

1.

$7 \times 2 = \underline{\quad}$

$$\begin{array}{r} 62 \\ \times 7 \\ \hline \end{array}$$

$7 \times 60 = \underline{\quad}$

$$\begin{array}{r} 62 \\ \times 7 \\ \hline 14 \end{array}$$

$14 + 420 = \underline{\quad}$

$$\begin{array}{r} 62 \\ \times 7 \\ \hline 14 \\ 420 \end{array}$$

2.

$6 \times 3 = \underline{\quad}$

$$\begin{array}{r} 53 \\ \times 6 \\ \hline \end{array}$$

$6 \times 50 = \underline{\quad}$

$$\begin{array}{r} 53 \\ \times 6 \\ \hline 18 \end{array}$$

$18 + 300 = \underline{\quad}$

$$\begin{array}{r} 53 \\ \times 6 \\ \hline 18 \\ 300 \end{array}$$

3.

$5 \times 6 = \underline{\quad}$

$$\begin{array}{r} 46 \\ \times 5 \\ \hline \end{array}$$

$5 \times 40 = \underline{\quad}$

$$\begin{array}{r} 46 \\ \times 5 \\ \hline 30 \end{array}$$

$30 + 200 = \underline{\quad}$

$$\begin{array}{r} 46 \\ \times 5 \\ \hline 30 \\ 200 \end{array}$$

1. Solve the equations. Then find the product.

A $3 \times 7 = \underline{\quad}$

B $6 \times 2 = \underline{\quad}$

C $5 \times 1 = \underline{\quad}$

D $3 \times 30 = \underline{\quad}$

E $6 \times 40 = \underline{\quad}$

F $5 \times 80 = \underline{\quad}$

$$\begin{array}{r} 37 \\ \times 3 \\ \hline \end{array}$$

$$\begin{array}{r} 42 \\ \times 6 \\ \hline \end{array}$$

$$\begin{array}{r} 81 \\ \times 5 \\ \hline \end{array}$$

G $3 \times 7 = \underline{\quad}$

H $4 \times 2 = \underline{\quad}$

I $6 \times 8 = \underline{\quad}$

J $3 \times 60 = \underline{\quad}$

K $4 \times 90 = \underline{\quad}$

L $6 \times 40 = \underline{\quad}$

$$\begin{array}{r} 67 \\ \times 3 \\ \hline \end{array}$$

$$\begin{array}{r} 92 \\ \times 4 \\ \hline \end{array}$$

$$\begin{array}{r} 48 \\ \times 6 \\ \hline \end{array}$$

2. Find the products.

M $\begin{array}{r} 72 \\ \times 3 \\ \hline \end{array}$

N $\begin{array}{r} 64 \\ \times 4 \\ \hline \end{array}$

O $\begin{array}{r} 35 \\ \times 2 \\ \hline \end{array}$

P $\begin{array}{r} 47 \\ \times 6 \\ \hline \end{array}$

Q $\begin{array}{r} 36 \\ \times 3 \\ \hline \end{array}$

R $\begin{array}{r} 58 \\ \times 2 \\ \hline \end{array}$

S $\begin{array}{r} 25 \\ \times 5 \\ \hline \end{array}$

T $\begin{array}{r} 54 \\ \times 3 \\ \hline \end{array}$

U $\begin{array}{r} 61 \\ \times 7 \\ \hline \end{array}$

V $\begin{array}{r} 72 \\ \times 6 \\ \hline \end{array}$

W $\begin{array}{r} 83 \\ \times 4 \\ \hline \end{array}$

X $\begin{array}{r} 92 \\ \times 3 \\ \hline \end{array}$

Y $\begin{array}{r} 28 \\ \times 3 \\ \hline \end{array}$

Z $\begin{array}{r} 86 \\ \times 5 \\ \hline \end{array}$

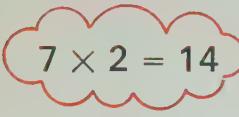
AA $\begin{array}{r} 33 \\ \times 5 \\ \hline \end{array}$

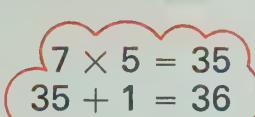
AB $\begin{array}{r} 19 \\ \times 6 \\ \hline \end{array}$

AC $\begin{array}{r} 58 \\ \times 9 \\ \hline \end{array}$

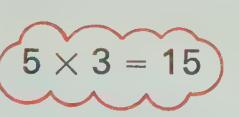
AD $\begin{array}{r} 77 \\ \times 8 \\ \hline \end{array}$

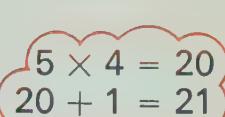
1. Give the correct digit for each . Part A is an example for you to follow.

A 
 $7 \times 2 = 14$


 $7 \times 5 = 35$

$35 + 1 = 36$

B 
 $5 \times 3 = 15$


 $5 \times 4 = 20$

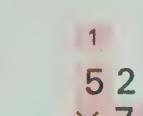
$20 + 1 = 21$


1

$5 \ 2$

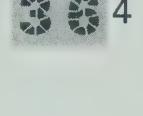
$\times 7$


4


1

$5 \ 2$

$\times 7$

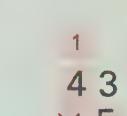

3 6


5

$4 \ 3$

$\times 5$

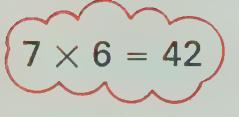

2

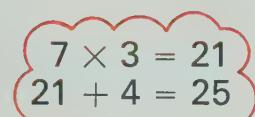

1

$4 \ 3$

$\times 5$


5

c 
 $7 \times 6 = 42$


 $7 \times 3 = 21$

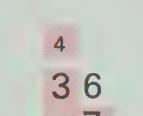
$21 + 4 = 25$


2

$3 \ 6$

$\times 7$


2


4

$3 \ 6$

$\times 7$

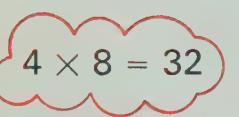

2

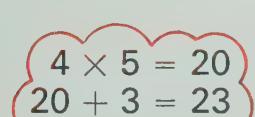

1

$5 \ 7$

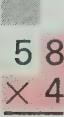
$\times 3$


1

E 
 $4 \times 8 = 32$


 $4 \times 5 = 20$

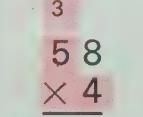
$20 + 3 = 23$


1

$5 \ 8$

$\times 4$

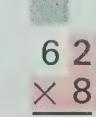

2


3

$5 \ 8$

$\times 4$

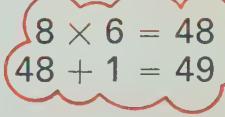

2


1

$6 \ 2$

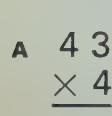
$\times 8$


6


 $8 \times 6 = 48$

$48 + 1 = 49$

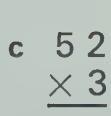
2. Find the products.

A 
 $4 \ 3$

$\times 4$

B 
 $2 \ 7$

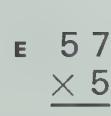
$\times 6$

C 
 $5 \ 2$

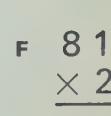
$\times 3$

D 
 $2 \ 4$

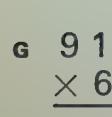
$\times 7$

E 
 $5 \ 7$

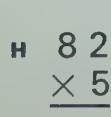
$\times 5$

F 
 $8 \ 1$

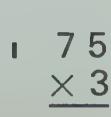
$\times 2$

G 
 $9 \ 1$

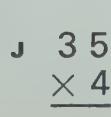
$\times 6$

H 
 $8 \ 2$

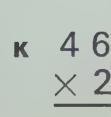
$\times 5$

I 
 $7 \ 5$

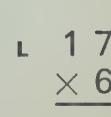
$\times 3$

J 
 $3 \ 5$

$\times 4$

K 
 $4 \ 6$

$\times 2$

L 
 $1 \ 7$

$\times 6$

Solve each problem. Workspace is provided for you.

1. In a bicycle race the winner rode 23 kilometres each hour for 3 hours. How many kilometres did he travel? _____

2. Mr. Smith figured he drove 57 kilometres each hour for 4 hours. How far did he drive? _____

3. Tom's father drives his car 6 km on each litre of gas. How far can he drive on 8 litres of gas? _____

4. If a car can travel 9 km on a litre of gas, how far can it travel on 21 litres? _____

5. A racing car was driven 160 kilometres per hour for 3 hours. How far did it travel? _____

CHANGE OF PACE

Show hands on the clocks.

1.



2 hours
later



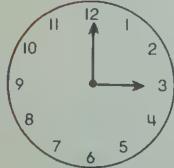
4.



1 hour
earlier



2.



3 hours
later



5.



15 minutes
later



3.



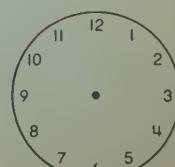
1 hour
later



6.



1 hour and
30 minutes
later



1. Solve the equation. Then give the number for the .

$$3 \times 8 = \underline{\quad}$$

$$3 \times 40 = \underline{\quad}$$

$$3 \times 600 = \underline{\quad}$$

$$24 + 120 + 1800 = \underline{\quad}$$

$$\begin{array}{r} 648 \\ \times 3 \\ \hline \end{array}$$

$$\begin{array}{r} 648 \\ \times 3 \\ \hline 24 \end{array}$$

$$\begin{array}{r} 648 \\ \times 3 \\ \hline 24 \\ 120 \end{array}$$

$$\begin{array}{r} 648 \\ \times 3 \\ \hline 24 \\ 120 \\ 1800 \end{array}$$

2. Give the correct digit for each .

$$3 \times 8 = 24$$

$$3 \times 4 = 12$$

$$12 + 2 = 14$$

$$3 \times 6 = 18$$

$$18 + 1 = 19$$

$$\begin{array}{r} 648 \\ \times 3 \\ \hline \end{array}$$

$$\begin{array}{r} 648 \\ \times 3 \\ \hline 4 \end{array}$$

$$\begin{array}{r} 12 \\ 648 \\ \times 3 \\ \hline 44 \end{array}$$

3. Find the products.

A $\begin{array}{r} 526 \\ \times 3 \\ \hline \end{array}$

B $\begin{array}{r} 348 \\ \times 4 \\ \hline \end{array}$

C $\begin{array}{r} 276 \\ \times 5 \\ \hline \end{array}$

D $\begin{array}{r} 521 \\ \times 2 \\ \hline \end{array}$

E $\begin{array}{r} 346 \\ \times 6 \\ \hline \end{array}$

F $\begin{array}{r} 537 \\ \times 3 \\ \hline \end{array}$

G $\begin{array}{r} 291 \\ \times 2 \\ \hline \end{array}$

H $\begin{array}{r} 526 \\ \times 6 \\ \hline \end{array}$

I $\begin{array}{r} 304 \\ \times 2 \\ \hline \end{array}$

J $\begin{array}{r} 271 \\ \times 3 \\ \hline \end{array}$

K $\begin{array}{r} 605 \\ \times 5 \\ \hline \end{array}$

L $\begin{array}{r} 720 \\ \times 7 \\ \hline \end{array}$

M $\begin{array}{r} 8324 \\ \times 5 \\ \hline \end{array}$

N $\begin{array}{r} 5320 \\ \times 4 \\ \hline \end{array}$

O $\begin{array}{r} 5412 \\ \times 4 \\ \hline \end{array}$

P $\begin{array}{r} 7248 \\ \times 3 \\ \hline \end{array}$

Q $\begin{array}{r} 5024 \\ \times 4 \\ \hline \end{array}$

1. Ring the multiplication problem that would give the better estimate for the first problem.

A 2×58 : 2×50 2×60

B 4×17 : 4×10 4×20

C 3×22 : 3×20 3×30

D 6×91 : 6×90 6×100

E 8×59 : 8×50 8×60

F 5×33 : 5×30 5×40

2. Tell whether each product is **more** or **less** than 100.

A 2×55 more

C 5×19 _____

E 6×15 _____

B 2×45 _____

D 4×29 _____

F 3×34 _____

3. Put a ring around the best estimate of the product.

A 4×53 : 100 200 300

B 2×201 : 200 400 600

C 2×49 : 100 200 300

D 6×99 : 600 500 400

E 2×199 : 400 500 600

F 2×105 : 150 200 250

G 4×48 : 300 200 100

H 4×24 : 100 200 300

4. Put a ring around the best estimate for each exercise.

A How many wheels on 33 tricycles?



100 200 300

B How many wheels on 68 cars?



100 200 300

C There are 4 weeks in a month. How many weeks are in 26 months?

100 200 300

D There are 52 weeks in a year. How many weeks are in 4 years?

100 200 300

E There are 32 pupils in a class. How many pupils are in 3 classes?

100 200 300

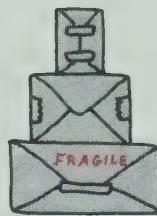
1. There are 60 minutes in an hour. How many minutes are in 6 hours? _____

2. One ticket costs 17 cents. Jill wants to buy 4 tickets. How much money does she need? _____



3. Mr. Small figured that his chickens laid 7 dozen eggs last week. How many eggs is this? _____

4. Bill mailed three packages. They cost 24 cents, 37 cents, and 52 cents. How much did it cost to mail all the packages? _____



5. Sue mailed 5 packages. The mailing charge for each one was 27 cents. How much did Sue spend? _____

6. Mr. Brown can drive his car 6 km on each litre of gas. How far can he drive on 18 litres of gas? _____



7. Ms. Gray owns a small car and can drive her car 9 km on a litre of gas. How far can she drive on 18 litres of gas? _____

8. How much farther can Ms. Gray drive on 18 litres of gas than Mr. Brown? _____

9. There are 12 months in a year. How many months are in 5 years? _____

10. There are 24 hours in a day. How many hours in three days? _____

11. On a vacation trip Jan figured her father was driving at a rate of about 73 kilometres per hour. At this rate, how far would they go in 4 hours? _____

12. John read that he would weigh about 2 times as much on Jupiter as he does on earth. About how much would John weigh on Jupiter if he weighs 42 kilograms on earth? _____

13. In an auditorium the centre section of seats has 24 rows with 9 seats in each row. How many seats are in this section? _____

14. At 645 kilometres per hour, how far can an airplane travel in 3 hours? _____



1. Find the products.

A $7 \times 10 = \underline{\hspace{2cm}}$

C $30 \times 10 = \underline{\hspace{2cm}}$

E $6 \times 40 = \underline{\hspace{2cm}}$

B $7 \times 100 = \underline{\hspace{2cm}}$

D $23 \times 10 = \underline{\hspace{2cm}}$

F $50 \times 3 = \underline{\hspace{2cm}}$

2. Solve.

A $4 \times 26 = (4 \times 20) + (4 \times \underline{\hspace{2cm}})$

B $6 \times 13 = (6 \times 10) + (\underline{\hspace{2cm}} \times 3)$

3. Find the products.

A $\begin{array}{r} 27 \\ \times 3 \\ \hline \end{array}$

B $\begin{array}{r} 51 \\ \times 7 \\ \hline \end{array}$

C $\begin{array}{r} 16 \\ \times 4 \\ \hline \end{array}$

D $\begin{array}{r} 34 \\ \times 6 \\ \hline \end{array}$

E $\begin{array}{r} 82 \\ \times 2 \\ \hline \end{array}$

F $\begin{array}{r} 94 \\ \times 3 \\ \hline \end{array}$

G $\begin{array}{r} 526 \\ \times 4 \\ \hline \end{array}$

H $\begin{array}{r} 334 \\ \times 6 \\ \hline \end{array}$

I $\begin{array}{r} 216 \\ \times 3 \\ \hline \end{array}$

J $\begin{array}{r} 5271 \\ \times 4 \\ \hline \end{array}$

K $\begin{array}{r} 6423 \\ \times 3 \\ \hline \end{array}$

4. There are 52 weeks in a year. A good estimate for the number of weeks in 8 years is (ring one):

300 400 500

5. 36 apples in one box. How many apples in 7 boxes? _____

6. If each year had 365 days, how many days in 3 years? _____

CHANGE OF PACE

Work the puzzle.

Across

1. $1000 - 2$
3. $4 + 4 + 4 + 4$
5. Ten hundred
7. 3×6
9. In 392 the 9 means $\underline{\hspace{2cm}}$
10. 4×7
12. $3 \times 67 = 2\underline{\hspace{2cm}}$
14. Largest 4-digit number
16. $7 \times \underline{\hspace{2cm}} = 70$
17. 300×3

Down

1. $(9 \times 100) + 1$
2. 9 nines
3. 100 tens
4. 4×15
6. $999 - 90 = 9\underline{\hspace{2cm}}$
8. 1658×5
11. $88 < \underline{\hspace{2cm}} < 90$
13. 10 tens
14. One more than ninety
15. $100 - 1$
16. $300 - 1$
17. $3 \times 67 = \underline{\hspace{2cm}}$

1		2		3	4
		5	6		
7	8		9		
		10	11	12	13
14			15		
			16		
			17		

1. Give the missing numbers.

A The  is "2 over and ____ up." (1)

B The  is ____ over and 2 up.

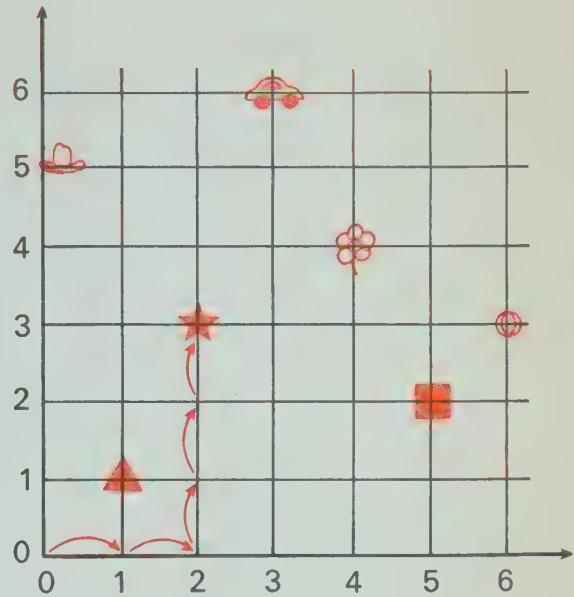
C The  is 1 over and ____ up.

D The  is ____ over and ____ up.

E The  is ____ over and ____ up.

F The  is ____ over and ____ up.

G The  is ____ over and ____ up.



The  above is "3 over and 6 up." We write $(3, 6)$.

The co-ordinates of the  are $(3, 6)$.

2. Fill in each blank with the correct letter or number.

A The letter  is 2 over and ____ up.

B The co-ordinates of  are $(2, \underline{\hspace{1cm}})$.

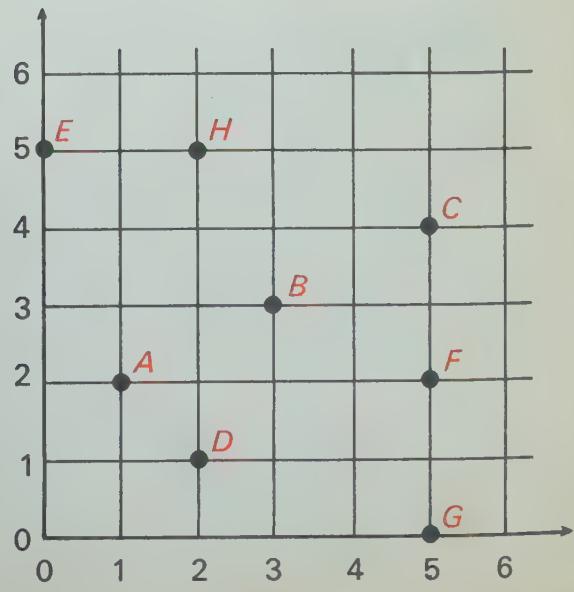
C What letter is at $(3, 3)$? ____

D The co-ordinates of  are $(\underline{\hspace{1cm}}, \underline{\hspace{1cm}})$.

E The letter  is at $(\underline{\hspace{1cm}}, \underline{\hspace{1cm}})$.

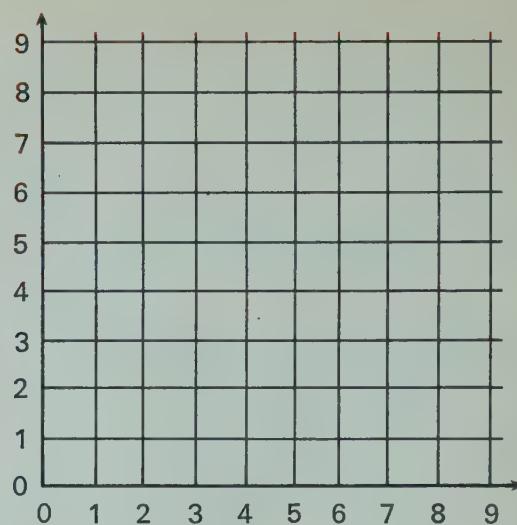
F The letter ____ is at $(1, 2)$.

G The co-ordinates of  are $(\underline{\hspace{1cm}}, \underline{\hspace{1cm}})$.



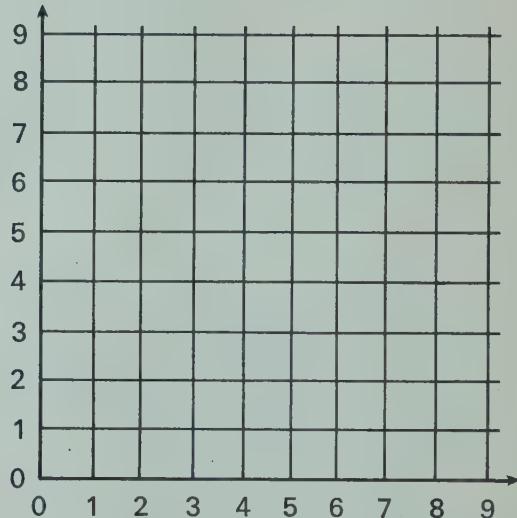
1. Use the grid at the right to graph each of these points. Write the letter beside it.

<i>A</i>	(3, 8)	<i>F</i>	(5, 4)
<i>B</i>	(7, 2)	<i>G</i>	(0, 4)
<i>C</i>	(2, 5)	<i>H</i>	(7, 0)
<i>D</i>	(4, 6)	<i>I</i>	(3, 1)
<i>E</i>	(8, 8)	<i>J</i>	(0, 0)



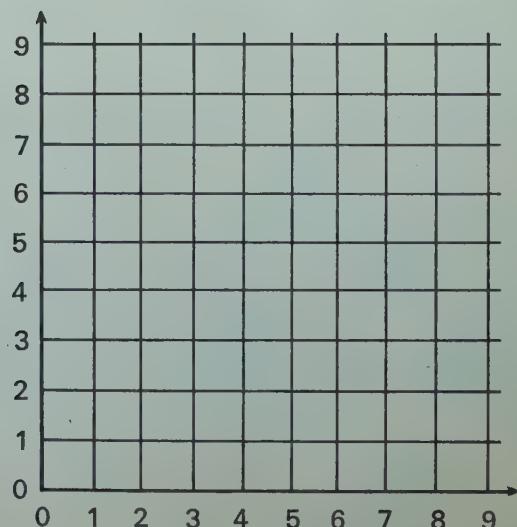
2. Draw a picture by graphing and connecting the points in the order given below.

$(2, 0) \rightarrow (3, 3) \rightarrow (1, 5)$
 $\rightarrow (3, 5) \rightarrow (4, 7) \rightarrow (5, 5)$
 $\rightarrow (7, 5) \rightarrow (5, 3) \rightarrow (6, 0)$
 $\rightarrow (4, 2) \rightarrow (2, 0)$



3. A Graph and connect the points in the order given below.

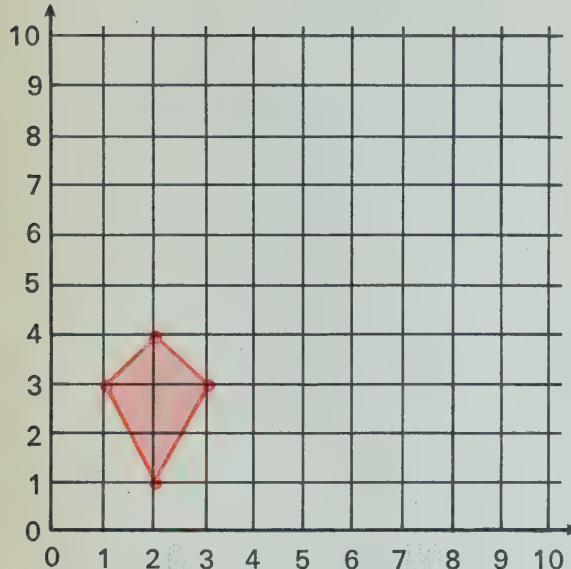
$(5, 3) \rightarrow (7, 5) \rightarrow (7, 1)$
 $\rightarrow (9, 1) \rightarrow (9, 9)$
 $\rightarrow (7, 9) \rightarrow (5, 6)$



B Draw the other half of the picture so that it is **symmetric**.

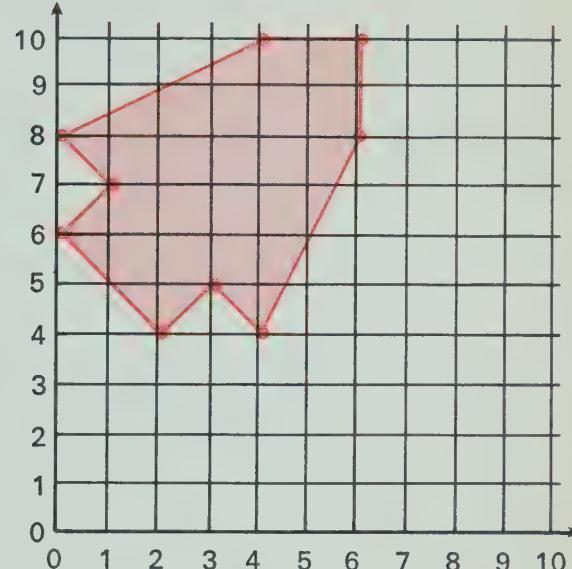
1. Move each point of the figure

3 over and 4 up 
Then connect them.



2. Move each point of the figure

4 over and 3 down 
Then connect them.



3. Graph the number pairs shown in the function table.

Example: If the input is 4 and the output is 1, the co-ordinates are (4, 1).

Function Rule

Subtract 3	
Input	Output
4	1
5	2
6	3
7	4
8	5
9	6



4. Find the output numbers. Then graph the number pairs on the same grid used for exercise 3.

Function Rule

Multiply by 2	
Input	Output
0	
1	
2	
3	
4	
5	

1. Give the correct number or letter for each blank.

A Point *A* is 5 over and ____ up.

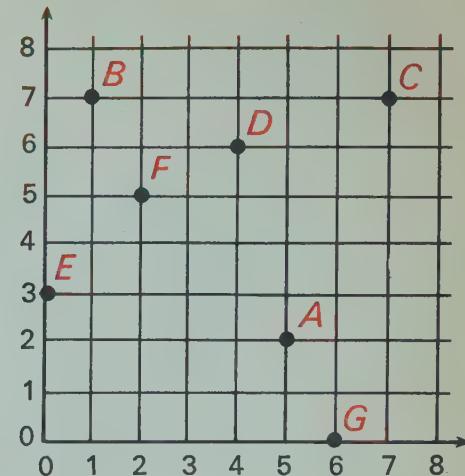
B The co-ordinates of *B* are $(1, \underline{\hspace{1cm}})$.

C Point *G* is at $(\underline{\hspace{1cm}}, \underline{\hspace{1cm}})$.

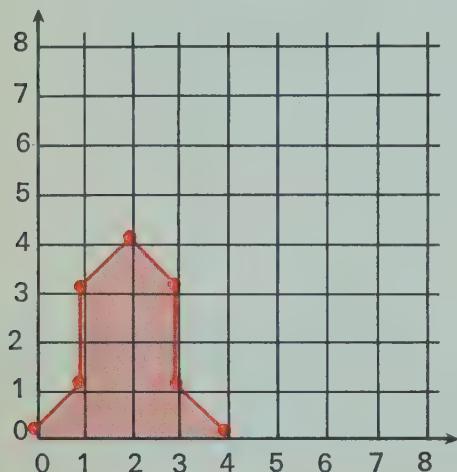
D The point at $(0, 3)$ is ____.

E The co-ordinates of *C* are $(\underline{\hspace{1cm}}, \underline{\hspace{1cm}})$.

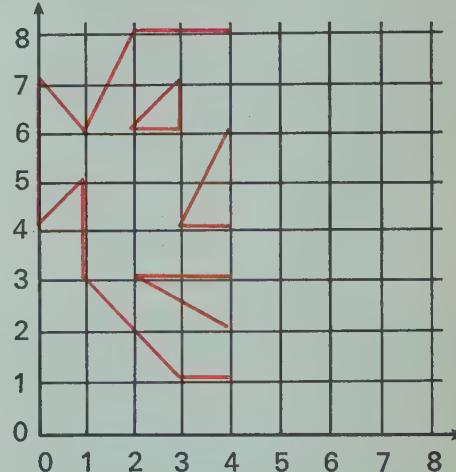
F Point ____ has co-ordinates $(2, 5)$.



2. Show where the figure will be after each point is moved **3 over and 4 up**.



3. Draw the other half of the figure so that it will be **symmetric**.



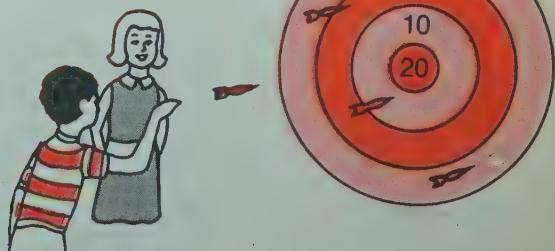
CHANGE OF PACE

1. How many points does Jim have on the first four darts? ____

2. If the fifth dart gets 20 points, how many points will he have in all? ____

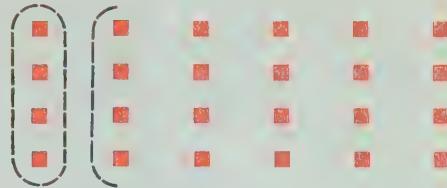
3. When Jane threw the five darts, she got a score of 27. Her first two darts were "tens" and the third dart was a "one". Of the last two darts, one was a ____ and the other was a ____.

4. Jim had a score of 42. Give a possible scoring. ____ + ____ + ____ + ____ + ____ = 42



1. Ring sets of 4 to find how many fours in 24.

There are _____ fours in 24.



2. Complete the jumps to zero to find how many fives in 20.



There are _____ fives in 20.

3. Complete the subtracting to zero to find how many threes in 15.

$$\begin{array}{r} 15 \\ - 3 \\ \hline 12 \end{array} \quad \begin{array}{r} 12 \\ - 3 \\ \hline \end{array} \quad \begin{array}{r} \quad \\ \quad \\ \hline \end{array} \quad \begin{array}{r} \quad \\ \quad \\ \hline \end{array}$$

There are _____ threes in 15.

4. First find the product. Then find the quotient.

A $5 \times 7 = \boxed{\quad}$ $\rightarrow 35 \div 7 = \boxed{\quad}$

B $3 \times 8 = \boxed{\quad}$ $\rightarrow 24 \div 8 = \boxed{\quad}$

C $4 \times 9 = \boxed{\quad}$ $\rightarrow 36 \div 4 = \boxed{\quad}$

D $2 \times 7 = \boxed{\quad}$ $\rightarrow 14 \div 7 = \boxed{\quad}$

E $6 \times 4 = \boxed{\quad}$ $\rightarrow 24 \div 6 = \boxed{\quad}$

F $6 \times 5 = \boxed{\quad}$ $\rightarrow 30 \div 5 = \boxed{\quad}$

G $7 \times 3 = \boxed{\quad}$ $\rightarrow 21 \div 7 = \boxed{\quad}$

H $9 \times 5 = \boxed{\quad}$ $\rightarrow 45 \div 9 = \boxed{\quad}$

5. First find the factor. Then find the quotient.

A $\boxed{\quad} \times 8 = 32 \rightarrow 32 \div 8 = \boxed{\quad}$

B $\boxed{\quad} \times 6 = 36 \rightarrow 36 \div 6 = \boxed{\quad}$

C $\boxed{\quad} \times 5 = 35 \rightarrow 35 \div 5 = \boxed{\quad}$

D $\boxed{\quad} \times 7 = 42 \rightarrow 42 \div 7 = \boxed{\quad}$

E $\boxed{\quad} \times 8 = 40 \rightarrow 40 \div 8 = \boxed{\quad}$

F $\boxed{\quad} \times 8 = 48 \rightarrow 48 \div 8 = \boxed{\quad}$

G $\boxed{\quad} \times 4 = 16 \rightarrow 16 \div 4 = \boxed{\quad}$

H $\boxed{\quad} \times 7 = 49 \rightarrow 49 \div 7 = \boxed{\quad}$

1. Find the products.

A $5 \times 3 = \underline{\hspace{2cm}}$

B $6 \times 4 = \underline{\hspace{2cm}}$

C $6 \times 6 = \underline{\hspace{2cm}}$

$5 \times 3 \times 10 = \underline{\hspace{2cm}}$

$6 \times 4 \times 10 = \underline{\hspace{2cm}}$

$6 \times 6 \times 10 = \underline{\hspace{2cm}}$

$5 \times 30 = \underline{\hspace{2cm}}$

$6 \times 40 = \underline{\hspace{2cm}}$

$6 \times 60 = \underline{\hspace{2cm}}$

D $8 \times 2 = \underline{\hspace{2cm}}$

E $7 \times 3 = \underline{\hspace{2cm}}$

F $4 \times 5 = \underline{\hspace{2cm}}$

$8 \times 2 \times 10 = \underline{\hspace{2cm}}$

$7 \times 3 \times 100 = \underline{\hspace{2cm}}$

$4 \times 5 \times 100 = \underline{\hspace{2cm}}$

$8 \times 20 = \underline{\hspace{2cm}}$

$7 \times 300 = \underline{\hspace{2cm}}$

$4 \times 500 = \underline{\hspace{2cm}}$

2. Find the two products. Then find the quotient.

A $4 \times 7 = \underline{\hspace{2cm}} \rightarrow 4 \times 70 = \underline{\hspace{2cm}} \rightarrow 280 \div 4 = \underline{\hspace{2cm}}$

B $6 \times 3 = \underline{\hspace{2cm}} \rightarrow 60 \times 3 = \underline{\hspace{2cm}} \rightarrow 180 \div 3 = \underline{\hspace{2cm}}$

C $3 \times 5 = \underline{\hspace{2cm}} \rightarrow 3 \times 50 = \underline{\hspace{2cm}} \rightarrow 150 \div 3 = \underline{\hspace{2cm}}$

D $6 \times 2 = \underline{\hspace{2cm}} \rightarrow 60 \times 2 = \underline{\hspace{2cm}} \rightarrow 120 \div 2 = \underline{\hspace{2cm}}$

E $5 \times 60 = \underline{\hspace{2cm}} \rightarrow 5 \times 600 = \underline{\hspace{2cm}} \rightarrow 3000 \div 5 = \underline{\hspace{2cm}}$

F $60 \times 7 = \underline{\hspace{2cm}} \rightarrow 600 \times 7 = \underline{\hspace{2cm}} \rightarrow 4200 \div 7 = \underline{\hspace{2cm}}$

G $4 \times 40 = \underline{\hspace{2cm}} \rightarrow 4 \times 400 = \underline{\hspace{2cm}} \rightarrow 1600 \div 4 = \underline{\hspace{2cm}}$

3. Find each missing factor. Then find the quotient.

A $2 \times \underline{\hspace{2cm}} = 14 \rightarrow 2 \times \underline{\hspace{2cm}} = 140 \rightarrow 140 \div 2 = \underline{\hspace{2cm}}$

B $4 \times \underline{\hspace{2cm}} = 12 \rightarrow 4 \times \underline{\hspace{2cm}} = 120 \rightarrow 120 \div 4 = \underline{\hspace{2cm}}$

C $3 \times \underline{\hspace{2cm}} = 24 \rightarrow 3 \times \underline{\hspace{2cm}} = 240 \rightarrow 240 \div 3 = \underline{\hspace{2cm}}$

D $5 \times \underline{\hspace{2cm}} = 30 \rightarrow 5 \times \underline{\hspace{2cm}} = 300 \rightarrow 300 \div 5 = \underline{\hspace{2cm}}$

E $6 \times \underline{\hspace{2cm}} = 12 \rightarrow 6 \times \underline{\hspace{2cm}} = 120 \rightarrow 120 \div 6 = \underline{\hspace{2cm}}$

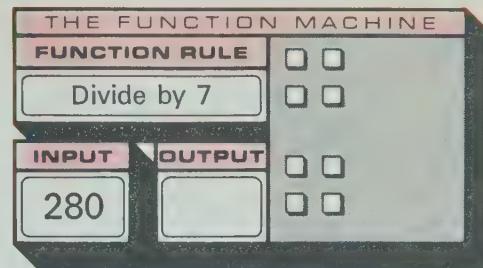
F $2 \times \underline{\hspace{2cm}} = 60 \rightarrow 2 \times \underline{\hspace{2cm}} = 600 \rightarrow 600 \div 2 = \underline{\hspace{2cm}}$

G $7 \times \underline{\hspace{2cm}} = 280 \rightarrow 7 \times \underline{\hspace{2cm}} = 2800 \rightarrow 2800 \div 7 = \underline{\hspace{2cm}}$

H $9 \times \underline{\hspace{2cm}} = 450 \rightarrow 9 \times \underline{\hspace{2cm}} = 4500 \rightarrow 4500 \div 9 = \underline{\hspace{2cm}}$

1. A Give the output number on the function machine.

B If the input number had been 420, the output number would be _____.



For exercises 2 through 9, think about the function machine and give the missing numbers and function rules.

2. Function Rule

Divide by 3

	Input	Output
A	180	60
B	240	80
C	120	
D	90	
E	150	
F	0	

3. Function Rule

Divide by 5

	Input	Output
A	150	30
B	200	40
C	250	
D	100	
E	350	
F	50	

4. Function Rule

Divide by 4

	Input	Output
A	120	30
B	160	
C	80	
D	200	
E	240	
F	0	

5. Function Rule

Divide by 6

	Input	Output
A	360	60
B	120	
C	180	
D	60	
E	240	
F	300	

6. Function Rule

Divide by 2

	Input	Output
A	80	
B	120	
C	0	
D	20	
E	100	
F	60	

7. Function Rule

Divide by 7

	Input	Output
A	70	
B	280	
C	350	
D	140	
E	490	
F	210	

8. Function Rule

A

	Input	Output
A	160	40
B	280	70
C	200	50
D	80	20
E	40	
F	120	

9. Function Rule

A

	Input	Output
A	30	10
B	150	50
C	90	30
D	120	
E	270	
F	0	

1. Find the differences. Then fill in the blanks.

A $18 \div 3$

$$\begin{array}{r}
 18 \\
 -3 \\
 \hline
 15 \\
 -3 \\
 \hline
 12 \\
 -3 \\
 \hline
 9 \\
 -3 \\
 \hline
 6 \\
 -3 \\
 \hline
 3
 \end{array}$$

Three was subtracted ____ times.

There are ____ threes in 18. $\rightarrow 18 \div 3 = \underline{\hspace{2cm}}$

B $35 \div 5$

$$\begin{array}{r}
 35 \\
 -5 \\
 \hline
 30 \\
 -5 \\
 \hline
 25 \\
 -5 \\
 \hline
 20 \\
 -5 \\
 \hline
 15 \\
 -5 \\
 \hline
 10 \\
 -5 \\
 \hline
 5
 \end{array}$$

Five was subtracted ____ times.

There are ____ fives in 35. $\rightarrow 35 \div 5 = \underline{\hspace{2cm}}$

2. Find the differences. Then solve the division equation.

A $24 \div 6$

$$\begin{array}{r}
 24 \\
 -6 \\
 \hline
 \end{array}$$

B $27 \div 9$

$$\begin{array}{r}
 27 \\
 -9 \\
 \hline
 \end{array}$$

C $35 \div 7$

$$\begin{array}{r}
 35 \\
 -7 \\
 \hline
 \end{array}$$

D $32 \div 8$

$$\begin{array}{r}
 32 \\
 -8 \\
 \hline
 \end{array}$$

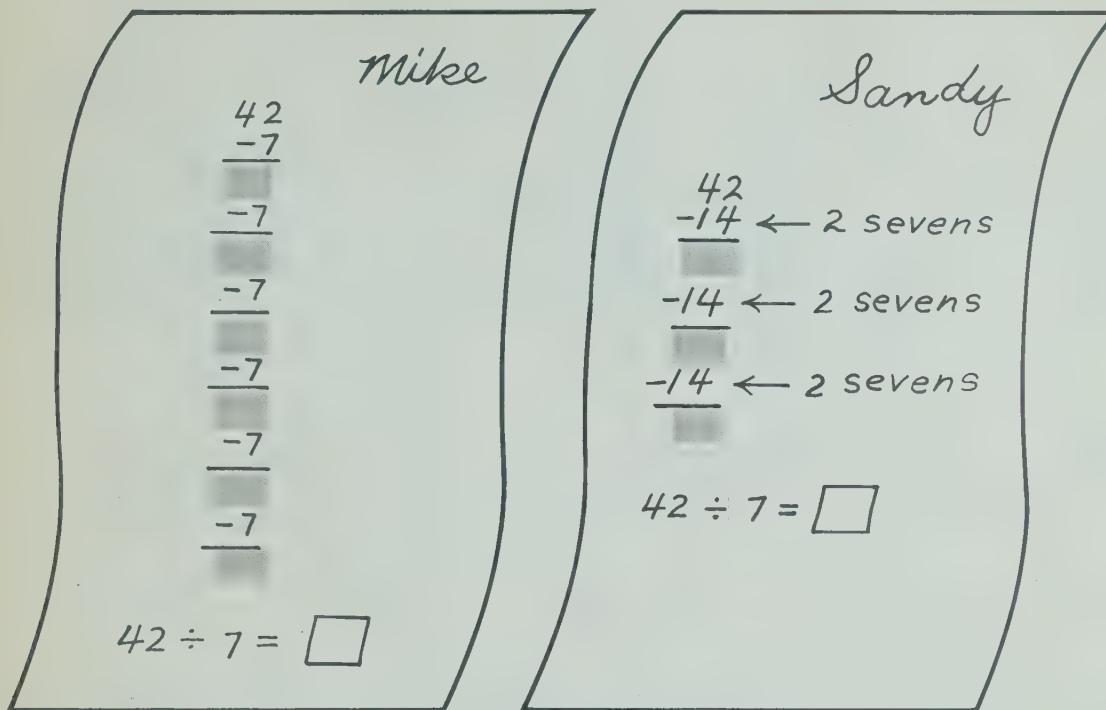
$$27 \div 9 = \boxed{\hspace{1cm}}$$

$$35 \div 7 = \boxed{\hspace{1cm}}$$

$$24 \div 6 = \boxed{\hspace{1cm}}$$

$$32 \div 8 = \boxed{\hspace{1cm}}$$

1. Mike and Sandy worked the same problem. Find the differences and solve the equation.



2. Mike subtracted one seven at a time.

A How many sevens did Sandy subtract each time? _____

B Did they both find the same number of sevens in 42? _____

C Whose method do you think is shorter? _____

3. Find the differences. Then solve the division equation.

A $\begin{array}{r}
 36 \\
 -12 \\
 \hline
 24
 \end{array}$ ← 3 fours

$\begin{array}{r}
 24 \\
 -12 \\
 \hline
 12
 \end{array}$ ← 3 fours

$\begin{array}{r}
 12 \\
 -12 \\
 \hline
 0
 \end{array}$ ← 3 fours

$36 \div 4 = \square$

B $\begin{array}{r}
 42 \\
 -24 \\
 \hline
 18
 \end{array}$ ← 4 sixes

$\begin{array}{r}
 18 \\
 -18 \\
 \hline
 0
 \end{array}$ ← 3 sixes

$42 \div 6 = \square$

C $\begin{array}{r}
 45 \\
 -18 \\
 \hline
 27
 \end{array}$ ← 2 nines

$\begin{array}{r}
 27 \\
 -18 \\
 \hline
 9
 \end{array}$ ← 2 nines

$45 \div 9 = \square$

Finding Quotients by Subtraction

Give the number for each . Then solve the division equation.

1. $42 \div 3$

How many threes in 42?

$$\begin{array}{r}
 42 \\
 -30 \leftarrow 10 \text{ threes} \\
 \hline
 12 \\
 -12 \leftarrow 4 \text{ threes} \\
 \hline
 0
 \end{array}$$

$42 \div 3 = 14$

2. $36 \div 2$

How many twos in 36?

$$\begin{array}{r}
 36 \\
 -20 \leftarrow 16 \text{ twos} \\
 \hline
 16 \\
 -16 \leftarrow 0 \text{ twos} \\
 \hline
 0
 \end{array}$$

$36 \div 2 =$ 

3. $56 \div 4$

How many fours in 56?

$$\begin{array}{r}
 56 \\
 -40 \leftarrow 16 \text{ fours} \\
 \hline
 16 \\
 -16 \leftarrow 0 \text{ fours} \\
 \hline
 0
 \end{array}$$

$56 \div 4 =$ 

4. $60 \div 5$

How many fives in 60?

$$\begin{array}{r}
 60 \\
 -50 \leftarrow 10 \text{ fives} \\
 \hline
 10 \\
 -10 \leftarrow 0 \text{ fives} \\
 \hline
 0
 \end{array}$$

$60 \div 5 =$ 

5. $64 \div 4$

How many fours in 64?

$$\begin{array}{r}
 64 \\
 -40 \leftarrow 24 \text{ fours} \\
 \hline
 24 \\
 -24 \leftarrow 0 \text{ fours} \\
 \hline
 0
 \end{array}$$

$64 \div 4 =$ 

6. $51 \div 3$

How many threes in 51?

$$\begin{array}{r}
 51 \\
 -30 \leftarrow 21 \text{ threes} \\
 \hline
 21 \\
 -21 \leftarrow 0 \text{ threes} \\
 \hline
 0
 \end{array}$$

$51 \div 3 =$ 

7. $32 \div 2$

How many twos in 32?

$$\begin{array}{r}
 32 \\
 -20 \leftarrow 12 \text{ twos} \\
 \hline
 12 \\
 -12 \leftarrow 0 \text{ twos} \\
 \hline
 0
 \end{array}$$

$32 \div 2 =$ 

8. $84 \div 7$

How many sevens in 84?

$$\begin{array}{r}
 84 \\
 -70 \leftarrow 14 \text{ sevens} \\
 \hline
 14 \\
 -14 \leftarrow 0 \text{ sevens} \\
 \hline
 0
 \end{array}$$

$84 \div 7 =$ 

9. $78 \div 6$

How many sixes in 78?

$$\begin{array}{r}
 78 \\
 -60 \leftarrow 18 \text{ sixes} \\
 \hline
 18 \\
 -18 \leftarrow 0 \text{ sixes} \\
 \hline
 0
 \end{array}$$

$78 \div 6 =$ 

Finding Larger Quotients by Subtraction

Find the number for each . Then solve the division equation.

1.

$75 \div 3$

$$\begin{array}{r}
 75 \\
 -30 \leftarrow 10 \text{ threes} \\
 \hline
 45 \\
 -30 \leftarrow 10 \text{ threes} \\
 \hline
 15 \\
 -15 \leftarrow 5 \text{ threes} \\
 \hline
 0
 \end{array}$$

$75 \div 3 = 25$

2.

$138 \div 6$

$$\begin{array}{r}
 138 \\
 -60 \leftarrow \square \text{ sixes} \\
 \hline
 78 \\
 -60 \leftarrow \square \text{ sixes} \\
 \hline
 18 \\
 -18 \leftarrow \square \text{ sixes} \\
 \hline
 0
 \end{array}$$

$138 \div 6 =$

3.

$72 \div 2$

$$\begin{array}{r}
 72 \\
 -20 \leftarrow \square \text{ twos} \\
 \hline
 52 \\
 -20 \leftarrow \square \text{ twos} \\
 \hline
 32 \\
 -20 \leftarrow \square \text{ twos} \\
 \hline
 12 \\
 -12 \leftarrow \square \text{ twos} \\
 \hline
 0
 \end{array}$$

$72 \div 2 =$

4.

$215 \div 5$

$$\begin{array}{r}
 215 \\
 -50 \leftarrow \square \text{ fives} \\
 \hline
 165 \\
 -50 \leftarrow \square \text{ fives} \\
 \hline
 115 \\
 -50 \leftarrow \square \text{ fives} \\
 \hline
 65 \\
 -50 \leftarrow \square \text{ fives} \\
 \hline
 15 \\
 -15 \leftarrow \square \text{ fives} \\
 \hline
 0
 \end{array}$$

$215 \div 5 =$

5.

$136 \div 4$

$$\begin{array}{r}
 136 \\
 -40 \leftarrow \square \text{ fours} \\
 \hline
 96 \\
 -40 \leftarrow \square \text{ fours} \\
 \hline
 56 \\
 -40 \leftarrow \square \text{ fours} \\
 \hline
 16 \\
 -16 \leftarrow \square \text{ fours} \\
 \hline
 0
 \end{array}$$

$136 \div 4 =$

6.

$294 \div 7$

$$\begin{array}{r}
 294 \\
 -70 \leftarrow \square \text{ sevens} \\
 \hline
 224 \\
 -70 \leftarrow \square \text{ sevens} \\
 \hline
 154 \\
 -70 \leftarrow \square \text{ sevens} \\
 \hline
 84 \\
 -70 \leftarrow \square \text{ sevens} \\
 \hline
 14 \\
 -14 \leftarrow \square \text{ sevens} \\
 \hline
 0
 \end{array}$$

$294 \div 7 =$

1. Give the number for each . Then solve the division equation.

A $96 \div 4$

How many fours in 96?

$$\begin{array}{r}
 96 \\
 -80 \leftarrow 20 \text{ fours} \\
 \hline
 16 \\
 -16 \leftarrow 4 \text{ fours} \\
 \hline
 0
 \end{array}$$

$96 \div 4 = 24$

B $160 \div 5$

How many fives in 160?

$$\begin{array}{r}
 160 \\
 -150 \leftarrow 10 \text{ fives} \\
 \hline
 10 \\
 -10 \leftarrow 0 \text{ fives} \\
 \hline
 0
 \end{array}$$

$160 \div 5 =$ 

C $94 \div 2$

How many twos in 94?

$$\begin{array}{r}
 94 \\
 -80 \leftarrow 14 \text{ twos} \\
 \hline
 14 \\
 -14 \leftarrow 0 \text{ twos} \\
 \hline
 0
 \end{array}$$

$94 \div 2 =$ 

D $141 \div 3$

How many threes in 141?

$$\begin{array}{r}
 141 \\
 -120 \leftarrow 21 \text{ threes} \\
 \hline
 21 \\
 -21 \leftarrow 0 \text{ threes} \\
 \hline
 0
 \end{array}$$

$141 \div 3 =$ 

E $144 \div 4$

How many fours in 144?

$$\begin{array}{r}
 144 \\
 -120 \leftarrow 24 \text{ fours} \\
 \hline
 24 \\
 -24 \leftarrow 0 \text{ fours} \\
 \hline
 0
 \end{array}$$

$144 \div 4 =$ 

F $224 \div 7$

How many sevens in 224?

$$\begin{array}{r}
 224 \\
 -210 \leftarrow 14 \text{ sevens} \\
 \hline
 14 \\
 -14 \leftarrow 0 \text{ sevens} \\
 \hline
 0
 \end{array}$$

$224 \div 7 =$ 

2. Use your own method of subtracting to find these quotients.

A $84 \div 6 =$ 

B $92 \div 4 =$ 

C $105 \div 3 =$ 

1. The example shows a new way to write division exercises. The numbers in the rings tell what multiple of the divisor was subtracted.

A How many threes were subtracted the first time? _____

B How many threes were subtracted the second time? _____

C How many threes were subtracted in all? _____

D Solve: $48 \div 3 =$

divisor

$$\begin{array}{r}
 16 \\
 \downarrow \\
 3 \overline{) 48} \\
 -30 \\
 \hline
 18 \\
 -18 \\
 \hline
 0
 \end{array}$$

2. Give the number for each ring. Then write the quotient in the _____.

A $4 \overline{) 60}$

$$\begin{array}{r}
 60 \\
 -40 \\
 \hline
 20 \\
 -20 \\
 \hline
 0
 \end{array}$$

B $3 \overline{) 78}$

$$\begin{array}{r}
 78 \\
 -30 \\
 \hline
 48 \\
 -30 \\
 \hline
 18 \\
 -18 \\
 \hline
 0
 \end{array}$$

C $7 \overline{) 168}$

$$\begin{array}{r}
 168 \\
 -70 \\
 \hline
 98 \\
 -70 \\
 \hline
 28 \\
 -28 \\
 \hline
 0
 \end{array}$$

3. Find the quotients.

A $3 \overline{) 54}$

B $5 \overline{) 65}$

C $4 \overline{) 100}$

Find the quotients.

1. $2 \overline{) 32}$

2. $3 \overline{) 69}$

3. $5 \overline{) 70}$

4. $4 \overline{) 116}$

5. $5 \overline{) 135}$

6. $7 \overline{) 224}$

CHANGE OF PACE

Find the number for each . Check your work.

1.  $\xrightarrow{\text{add 6}} 13$

5.  $\xrightarrow{\text{subtract 5}} \img[alt="red square" data-bbox="705 730 755 758}]$ $\xrightarrow{\text{add 9}} 17$

2.  $\xrightarrow{\text{subtract 4}} 12$

6.  $\xrightarrow{\text{subtract 4}} \img[alt="red square" data-bbox="655 793 705 821}]$ $\xrightarrow{\text{multiply by 2}} 12$

3.  $\xrightarrow{\text{add 10}} 32$

7.  $\xrightarrow{\text{add 7}} \img[alt="red square" data-bbox="655 856 705 884}]$ $\xrightarrow{\text{divide by 3}} 8$

4.  $\xrightarrow{\text{multiply by 2}} 12$

8.  $\xrightarrow{\text{divide by 2}} \img[alt="red square" data-bbox="655 909 705 937}]$ $\xrightarrow{\text{subtract 8}} 0$

1. Answer **add, subtract, multiply, or divide** to tell what operation you would use to solve the problem.

A Tom had marbles. He got more marbles. How many does he have now? _____

B Jane had cents. She spent cents. How much does she have left? _____

C Sue practiced her music lesson for minutes. This was minutes more than she practiced last time. How long did she practice last time? _____

D In Jim's room there were rows of seats and seats in each row. How many seats were there? _____

E Pat had records and Pam had records. How many more records did Pat have than Pam? _____

F Jack had baseball cards. He put them in stacks with cards in each stack. How many stacks of cards did he have? _____

2. Short stories. Solve the problems.

A 7 bags. 12 balls in each bag. How many balls? _____

E 36 cents for a litre of milk. 4 glasses in a litre. At this rate, how much is a glass of milk? _____

B 364 days. 7 days a week. How many weeks? _____

F 315 chairs. 5 rows (same number in each). How many chairs in each row? _____

C 24 bottles of pop in a case. Drank 15 of them. How many left? _____

G 12 in a dozen. 8 dozen eggs. How many eggs? _____

D 128 books in 8 boxes. How many books in each box? _____

H 216 horseshoes. 4 shoes per horse. How many horses? _____

1. Study the examples. Then answer the questions.

A Quotient →
$$\begin{array}{r} 14 \\ 3 \overline{) 42} \\ - 30 \\ \hline 12 \\ - 12 \\ \hline 0 \end{array}$$

 Divisor → 3 10 4
 Remainder → 0

B Quotient →
$$\begin{array}{r} 13 \\ 5 \overline{) 67} \\ - 50 \\ \hline 17 \\ - 15 \\ \hline 2 \end{array}$$

 Divisor → 5 10 3

C Quotient →
$$\begin{array}{r} 12 \\ 6 \overline{) 75} \\ - 60 \\ \hline 15 \\ - 12 \\ \hline 3 \end{array}$$

 Divisor → 6 10 2

In example A, the remainder is 0. In examples B and C, the remainder is **not** zero.

- A** What is the quotient in example A? _____
- B** What is the divisor in example A? _____
- C** What is the quotient in example B? _____
- D** What is the divisor in example B? _____
- E** What is the remainder in example B? _____
- F** What is the remainder in example C? _____

2. Find the quotients and remainders. Remember, the remainder may not be zero.

A $4 \overline{) 103}$

B $6 \overline{) 139}$

C $6 \overline{) 155}$

D $7 \overline{) 222}$

E $3 \overline{) 265}$

F $9 \overline{) 738}$

1. Use the check suggested by the arrows to tell which of the exercises have been completed correctly. Ring one of the words, "correct" or "incorrect," for each exercise.

$$4 \overline{)27} \quad \begin{array}{r} 6 \\ 24 \\ \hline 3 \end{array}$$

correct
incorrect

$$3 \overline{)22} \quad \begin{array}{r} 7 \\ 21 \\ \hline 1 \end{array}$$

correct
incorrect

$$5 \overline{)37} \quad \begin{array}{r} 7 \\ 35 \\ \hline 3 \end{array}$$

correct
incorrect

$$6 \overline{)20} \quad \begin{array}{r} 3 \\ 18 \\ \hline 2 \end{array}$$

correct
incorrect

$$5 \overline{)30} \quad \begin{array}{r} 6 \\ 30 \\ \hline 0 \end{array}$$

correct
incorrect

$$2 \overline{)11} \quad \begin{array}{r} 5 \\ 10 \\ \hline 1 \end{array}$$

correct
incorrect

$$4 \overline{)22} \quad \begin{array}{r} 5 \\ 20 \\ \hline 2 \end{array}$$

correct
incorrect

$$6 \overline{)42} \quad \begin{array}{r} 7 \\ 40 \\ \hline 2 \end{array}$$

correct
incorrect

2. Find the quotient and remainder. Then check your answer.

A $5 \overline{)42}$

B $4 \overline{)25}$

C $6 \overline{)35}$

D $5 \overline{)163}$

E $8 \overline{)176}$

F $2 \overline{)45}$

1. Find the two products. Then find the quotient.

A $3 \times 6 = \underline{\hspace{2cm}}$ → $3 \times 60 = \underline{\hspace{2cm}}$ → $180 \div 3 = \underline{\hspace{2cm}}$

B $4 \times 60 = \underline{\hspace{2cm}}$ → $4 \times 600 = \underline{\hspace{2cm}}$ → $2400 \div 4 = \underline{\hspace{2cm}}$

2. Find each missing factor. Then find the quotient.

A $4 \times \underline{\hspace{2cm}} = 12$ → $4 \times \underline{\hspace{2cm}} = 120$ → $120 \div 4 = \underline{\hspace{2cm}}$

B $5 \times \underline{\hspace{2cm}} = 250$ → $5 \times \underline{\hspace{2cm}} = 2500$ → $2500 \div 5 = \underline{\hspace{2cm}}$

3. Find the quotient and remainder. Then check your answer.

A $6 \overline{) 138}$

B $3 \overline{) 115}$

C $4 \overline{) 219}$

R

CHANGE OF PACE

Work the puzzle.

Across

1. 11 tens
3. $300 + 60 + 1$
6. 5×17
7. 100 tens
8. $1000 - 1$
10. 5×70
11. $607 - 297$
13. $4 \times (8 \times 10)$
14. 667×10
17. Next prime after 7
19. $103 + 156 + 273$
20. $(12 \times 5) \times 10$

Down

1. 3×6
2. $836 + 759$
3. $(4 \times 8) - 2$
4. An estimate for 59
5. $10 \times 10 \times 10$
7. 1 ten and 9
9. $180 \div 2$
10. 613×5
11. $192 \div 6$
12. Ten hundred and ten
13. In 236 the 3 means 
15. $315 \div 5$
16. $71 < \blacksquare < 73$
18. $316 = 300 + \blacksquare + 6$

1	2			3	4	5
6			7			
	8	9				
10				11	12	
			13			
14	15	16			17	18
			20			

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